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# GLEANINGS

A JOURNAL DEVOTED  
TO BEES  
AND HONEY  
AND HOME  
INTERESTS.

## BEE CULTURE

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No. 15.

### STRAY STRAWS

FROM DR. C. C. MILLER.

MR. HARBISON has set out a large plantation of the black (or ball) sage, and finds the profits exceedingly large.—Prof. Cook, in *American Bee Journal*.

MR. EDITOR, on p. 525 you speak in what seems a commendatory way of replacing brood-combs with foundation when the combs become dark. Do you really mean that?

POPE LEO calls honey "that celestial gift." [The pope is right. No other sweet, pure and simple, can be used for direct consumption without some special manipulation on the part of man.—ED.]

SOME POINTS given in "Musings," p. 514, confirm the opinion that, the riper and thicker honey is, the less inclined to granulate; and yet it is sometimes insisted that thickening hastens granulation.

HONEY-SALVE is recommended by Dr. Kneipp as an excellent dressing for sores and boils. Take equal parts honey and flour, add a little water, and stir thoroughly together. Don't make too thin.

THE *Southland Queen* reports Dr. Stell, in Mexico, getting \$1 a section for honey, a total of \$1750 from ten colonies. Even cutting that in two to make it American money, it makes \$87.50 per colony. Not so bad.

THE *Leipziger Bienenzeitung* cites a case to prove that bees gnaw wax from old combs and carry it into the hive on their legs. I think that is nothing uncommon; but is such wax ever used except as a substitute for propolis?

J. F. MCINTYRE keeps his 600 colonies of bees in one apiary, says Prof. Cook, in *American Bee Journal*. What can't they do in California? [This is remarkable. In most localities in the Northern States, 125 colonies at the most would be too many.—ED.]

THE ANTICIPATION of a big crop everywhere because white clover is so plentiful is likely to amount to a scare. When the total honey crop is footed up, I doubt whether the figures

will be as large as a good many are now anticipating. [I am beginning to think the crop is not going to be as large as we at first expected. See editorial on this point in another column.—ED.]

I DON'T KNOW of a man in the ranks of beekeepers to whom will go out more kindly wishes from all for a happy outcome of his recent matrimonial venture than to my dear friend Prof. Cook. Blessings on his head. [You are right, doctor. GLEANINGS wishes the professor blessings and joy.—ED.]

PFARRER FLEISCHMANN put a thermometer in 8 different colonies in winter, and found a different temperature in each. The thermometer rose 6° to 8° on feeding, but settled back to its former place in a few hours. [Doctor, why didn't you tell what the temperature was in the cluster during winter? I suppose it was somewhere about 70 Fahr.—that is, in the very center of the cluster itself.—ED.]

HAVING REPORTED that I never saw laying queens fight, I thought I'd give the matter a severe test. The other Saturday I put six queens in one cage. They seemed to quarrel more or less throughout the day, but in the evening all appeared alive and well. On Monday morning, however, one lone queen was left to tell the tale. [This is interesting. And now the question arises, Was the sole survivor the fittest? She doubtless was the survival of the strongest.—ED.]

IT'S NOT WONDERFUL that, in a certain location, white clover should be more plentiful in 1897 than ever before. But it is decidedly remarkable that this should be so generally the case all over. Wonder why. [Yes, why? We can only guess that the abundance of rain, and cool weather in the early spring, had something to do with it. But after all, this does not entirely explain it, because we have had cool wet springs before, without a remarkable showing of clover following.—ED.]

BOTTOM STARTERS at Medina, you say, Mr. Editor, were about  $\frac{1}{2}$  inch. My bees are more inclined to tear down such narrow starters;  $\frac{3}{4}$  deep are more respected, and I'm not sure they curl worse. But I'm rather expecting to use drawn foundation for bottom starters, even at the present high price;  $\frac{1}{2}$  inch of that might work all right. [A great



many of our half-inch bottom starters did curl over. If they had been  $\frac{3}{4}$  inch I am afraid they all would have done so. Perhaps our foundation was *too* light.—Ed.]

DO YOU REMEMBER how some vigorously protested that wired brood-combs would be a failure, and challenged the production of a single wired comb with brood all over the wires? It makes one smile after seeing hundreds of such combs, and I'm wondering a little whether some of the protests against drawn foundation will not turn out the same way. [When the wiring of combs was first talked of it was before my day in active bee culture; but I have no doubt that what you say regarding it is true. Why will human nature be so obtuse and contrary?—Ed.]

A LUBRICANT by B. Rietsche is as follows: Put 2 oz. soft soap in a little sack. Stir the sack in 5 quarts of warm water till the soap is dissolved, then add 5 quarts cold water. The plates of the Rietsche press are plunged into this liquid, and by this means 150 sheets of foundation are now made in an hour. I should want section foundation well rinsed. [If the Rietsche press must be immersed in a fluid every time a sheet has to be taken from it, I should question very much whether there is more than one man in the world who could get off anywhere near 150 sheets per hour.—Ed.]

J. B. GRIFFIN writes that foundation was shipped to Georgia from Medina, and the paper slipped to one side, leaving a margin of  $\frac{3}{4}$  inch without paper. The papered part was all right, but that  $\frac{3}{4}$  inch was one solid piece 8 inches thick. That settles it that foundation must be papered to stand great heat in shipment. The time of year may have something to do with it. But I'd feel safer with the paper for the South. [I have been talking with young Louis Dadant, of Dadant & Son, regarding the advisability of leaving paper out of foundation. He shook his head very decidedly, adding that they could never think of doing it. We never considered the matter seriously, any more than to hold ourselves in readiness to ship without paper to those who specifically requested it.—Ed.]

DID YOU ever notice that an old black comb will start robbing much sooner than a snow-white section? In a harvest, when you can safely leave a super of sections exposed all day long, it isn't best to have brood-combs standing around. [I for one never noticed that old black comb would start robbing quicker than honey in sections; but I have noticed that honey and brood together would start the bees much quicker than either alone; and when once started the bees are far crosser than when robbing from honey alone. I have observed, also, that the mutilation of brood, for instance the uncapping from drone brood, very often makes the bees decidedly savage. When destroying drone brood I am careful to have the smoker well going, and work rapidly enough to prevent bees robbing.—Ed.]

A SECOND STORY of brood-frames filled with foundation was put over colony No. 63, so the queen could occupy it for brood. Instead of

that I found eight frames of honey sealed solid from top to bottom. I said, "I'll have that in sections." I uncapped the honey and alternated the frames of honey with the frames of brood, then put sections over. What do you think? Those pesky bees coolly sealed that honey all up again! [Without trying exactly the same experiment, I should be inclined to believe that the putting-in of the frames of foundation in alternation would have a decided tendency to cause the bees to do exactly what they did do. If it is not too late, suppose you try the experiment of leaving out frames of brood, and putting a super on top. While I do not know that they would carry the honey above, they would not, I opine, be in as great a hurry to cap it up again in the same combs.—Ed.]

I'M NOT OVERSTATING, I think, when I say the clover bloom was 50 per cent greater this year than ever before. But I'll get no crop in proportion. Two of my three apiaries have suffered from drouth. [Wherever there has been some drouth, the crop of clover honey will, of course, be diminished in proportion. There has been no drouth in this vicinity; and yesterday, July 22, when I was at the out-yard, and at Mr. Vernon Burt's also, the bees were bringing in honey heavily. A good portion of it was probably coming in from red clover; but frequent rains have seemed to give even white clover a new start. A week ago I supposed the honey season had closed, or at least it ought to have stopped; but in the mean time bees have taken supers of the drawn foundation, filled them with honey, and capped them over. Supers containing foundation only have scarcely been touched. This goes to show that the flow from clover is light.—Ed.]

O. O. POPPLETON rightly objects, p. 517, to wide bottom-bars with a space between comb and bottom-bar. But I'm getting my combs built down solid to the bottom-bar, and so far am well pleased with bottom-bars  $1\frac{1}{2}$  wide. I've been told that, in time, the bees will dig out a space between comb and bottom-bar—a prophecy which I'm hoping may turn out to be false. [I do not know but you may think I am fickle; but since the question of wide and narrow bottom-bars has been brought up I have been watching the matter very closely. In answer to a correspondent in another column I expressed myself as believing that it was a mistake to change from narrow  $\frac{3}{8}$  bottom-bars to wider ones, but at the same time admitted that the one objection to the narrow bars was that the bees would build clear past them to the first set of frames below. Well, yesterday, July 22, when I was at the out-apiary I took hold of an extracting-super, eight-frame, full-depth, and attempted to lift it off the hive. To my surprise it seemed to be fastened down with burr-combs. I tugged and pulled until I got it loose. Quite by accident half the frames on the one side of the super contained narrow bottom-bars, and the other half were regular  $\frac{3}{4}$ -inch-wide bottom-bars. Examination showed that burr-combs had been attached to every one of the frames first mentioned; but there was not a burr-

comb under the other half of the super where there were bottom-bars  $\frac{3}{4}$  inch wide, and yet the combs were built clear down to them. In case of the narrow bars, the bees had extended the combs clear past them, and attached them solidly to the top-bars of the frames below.—ED.]

### GRADING HONEY.

Defects of the Washington Grading, Chicago Grading, and the Gradings Recently Proposed in Gleanings.

BY B. WALKER.

*Friend Ernest:*—I see from the last issue of GLEANINGS that the matter of grading honey is once more up for discussion, with a view of reaching a speedy solution. Fearing that undue weight has been given to the changes I have proposed, as you have in your final comments stated so kindly and yet so emphatically, and believing that no set of rules ought to be adopted that would fail of receiving our approval, and as both you and Dr. Miller seemed inclined to favor, in the main, the proposed changes, and as I must say that neither set of rules as modified would be sanctioned by me, and realizing that it is very important that no serious mistake be made at this time, I am impelled to ask another hearing.

Yes, I have a confession to make and an explanation to offer; and at the risk of being regarded as fickle-minded, not to say dishonest, I propose, with your permission, to make the one and offer the other at this time.

No, Ernest, the rules you have published as "Walker's Amended Washington Rules" do not now nor have they at any time fully set forth my views or exemplified my practice in grading honey. Do you ask why I offer them, then? I will tell you. I have been very desirous to see some change, at least, made for the better in the rules already in force; and in proposing the suggested alterations, like an old-party politician preparing his platform, rather than a "*dyed-in-the-wool*" third-party man of thirty years' standing, who has never once allowed expediency to stand in the way of principle in matters political, I weakly allowed myself to offer such changes as I considered would stand at least some show of being adopted. Still, bear in mind what friend Hutchinson had to say of the Washington rules, and the weight you had given his views at the time; and not forgetting that, at the time of the adoption of the original rules for grading at the Chicago convention, the requirements of which were far more exacting than the Washington rules, when, as a member of the committee for preparing these rules, I was not even allowed to read to the convention those I had drawn up for its consideration, and recalling, too, that when, a little later on, the rules prepared by friend Baldrige were rushed through the convention (my vote being the only dissenting one), I had the temerity to ask how many members of the convention

had ever really raised, graded, and marketed five thousand pounds of comb honey, I was promptly called down by the chairman of the committee on rules for grading in these terms: "We don't propose to have this convention run by one man; and I will have you to understand that we know how to grade honey, even if we don't know how to raise it."\*

Realizing, too, that the alterations I should propose were to run the gauntlet of Dr. Miller's criticism, who, as chairman of this same convention, failed to recognize the request to have my proposed rules even read,† I naturally felt reluctant to propose changes which would in all probability fail of adoption at this time. Believing now there is a real determination to adopt something practical, I wish, with your permission, to state more fully what my views and practice really are.

Right at the outset I wish to say that I agree most heartily with Miss Wilson in the view that the words "the comb unsoiled by travel-stain or otherwise" should be stricken out of the description of the fancy grade. In fact, I have not for many years past allowed a slight soiling of the comb surface only to exclude a section from the fancy grade; but at the same time I have uniformly kept such sections by themselves, and put the snow-white combs in a separate grade, which I have termed "Extra Fancy."

When snow-white combs, because of some slight defect, had to be excluded from the "Extra Fancy" grade, I have made a practice of keeping such sections in separate cases. Such cases also, in crating for shipment, and in distributing on the market, have been grouped together, so that the contrast in the color of the cappings would not attract attention.

I have found, by long experience in many different markets, that the important thing is to keep the snow-white combs separate from the slightly soiled ones, although not one grocer in a hundred or one consumer among ten thousand will ever object to the latter as not being fancy. Right here I will affirm that not one among all of the exhibits of honey at the last World's Fair—yes, I will go further, and say not one case in these exhibits that were the admiration of thousands, and that finally were awarded medals, but was open to criticism in this matter of slightly soiled combs, *if perfect in other respects*; and really that exhibit which received the highest praise of all, doubtless on account of the faultless filling, sealing, and fastening, was most deficient of all in the eyes of the expert in this one particular—"slightly soiled combs." As I had occasion to handle over section by section while grading thousands of pounds taken from different State exhibits, and was obliged to make in every instance four different grades, very little of which found a place in the extra-fancy

\* I afterward had the pleasure (with his consent) of grading this man's World's Fair exhibit, which he often referred to as the finest on the ground, into five grades according to my ideas of grading.

† It is no more than fair that I should state here that the doctor soon afterward wrote me that the slight was not an intentional one.



grade, even with my lax system of grading, I ought to know what I am talking about.

Right here it occurs to me that the only reason why friend H. did not have a single complaint against the Washington rules was because nobody ever made any practical use of them; but if anybody attempted to do so he evidently thought best to ignore them altogether, and *keep perfectly quiet*.

I can scarcely agree with Dr. Miller in the view that the even thickness of combs, with reference to the fancy grade, needs no mention; and if he will try his hand at grading a few tons out of that large portion of the crop which is raised without the use of separators, I think he will find reason to change his mind. The word "comparative" that he objects to, however, does not suit me either; but it was used as a concession to brevity. My preference is for more definite terms, even if more space is required. Neither can I see the propriety of inserting the words "outside of wood," etc., with reference to scraping free from propolis. I am aware that it is seldom that the inside of a section requires attention on this account, but occasionally clots of bee-glue on the inside of edges of sections are very noticeable, and should be removed.

In my faith and practice, not less than four grades are required in order to comprise the great bulk of marketable honey. These I have named as follows: Extra Fancy, Fancy, No. 1, No. 2.

#### EXTRA FANCY.

All sections to be well filled, combs straight, not varying in weight more than two ounces in any one shipping-case; the combs of uniform color, of nearly even thickness, firmly fastened to four sides, and unsoiled by travel-stain or otherwise; all cells sealed except the row next to the wood; sections must be new and neat.

#### FANCY.

Like Extra Fancy, except the combs may be slightly fastened to or detached from the bottom, and not perfectly straight. The entire comb surface may be *very* slightly or half of it slightly soiled; not to exceed two cells may contain bee-bread; not to exceed half a dozen may be unsealed, or contain light-amber honey, and the weights vary three ounces in any one shipping-case; sections may be slightly stained, but the wood must be reasonably neat.

#### NO. 1.

Like Fancy, only combs may be somewhat but not *very* crooked; vary in weight four ounces in a shipping-case; one-eighth part of comb contain light amber honey, an equal amount of comb surface soiled or unsealed, or the entire surface slightly soiled; half a dozen cells of bee-bread may be present, and the sections may be somewhat but not much stained or soiled with propolis.

#### NO. 2.

Like No. 1, but combs may be more crooked and uneven, and not over three-fourths filled; but any one section must weigh half as much as the heaviest section in the case. Twice as many cells of bee-bread or amber honey are

permissible; one-fourth part of the comb may contain amber honey, or an equal amount of comb surface may be unsealed or much soiled, or the entire surface considerably soiled.

Supplementary to these rules I make use of a list of defects somewhat as follows:

A slight soiling of a small portion of one side of the comb surface; a very slight soiling of one entire comb surface; half a dozen cells of light-amber honey on one side of comb near the wood, or half that number in the body of the comb; a cell of bee-bread; a couple of unsealed cells on one side of the comb inside of the outer row; comb detached, or not firmly fastened at the bottom; wood slightly stained or soiled; comb not perfectly straight in the absence of separators; a slight crack or marring of the comb surface.

The presence of any one of the above-mentioned defects in a section does not exclude it from the extra-fancy grade. In addition to those already mentioned as belonging to these grades, any two of them are to be allowed in the fancy grades, and all of them in the No. 1 grade.

Doubtless this will appear a formidable list of defects to tolerate in the fancy grades; but in actual practice, few of them are present in any one case, and, where present, are noticeable, as a rule, only to the expert.

Whether this method of grading will meet with the approval of bee-keepers, remains to be seen. It is at once evident that, if generally adopted, it will result in placing a large portion of the crop (that under present rules would find a place in No. 1 grade) in the fancy grade, while another portion will stand a show of selling at an extra price by taking rank as extra fancy.

When I tell you that I have been frequently informed by jobbers that my No. 1 honey averaged better than that they frequently bought for fancy, that my fancy grade has not failed to suit hundreds of particular customers among retail grocers, and that I have never been able to get a sufficient supply of the extra-fancy grade to meet the demands of my most exacting patrons, you will see that I for one at least have no occasion for adopting some other system at present.

I am aware that these rules will be regarded by many as altogether too prolix. At any rate, you can see that the concise ones that have been in force for four years past have been any thing but a success; and I venture the opinion that any set of rules, no matter how worded, if equally brief, will fail of being of practical use. To my mind, it is a case where mere brevity has no particular merit.

Even with the lengthy set of rules I propose, unless a 5th grade is made use of, a great deal of marketable honey will have to be thrown out; and even the expert will often be puzzled to find a place for choice honey that has no adequate description in these rules. Of course, a good deal will have to be left to each man's judgment; but where experts differ, it will be of little consequence where certain sections are placed, as no one will kick, and the difference in the outcome to the producer will be slight.

By the way, I notice you made a mistake in stating the price per pound I offered in my ad't which you were afraid to publish. It was only 25 cts. per pound, and the offer referred to the rules adopted at the Northwestern convention held at Chicago, instead of to the Washington rules, the former being the more strict in their wording. See the *Review*, Vol. V., page 18. Still, I have no doubt I should have been perfectly safe in offering \$25 instead of 25 cts. per pound for the grade described.

[Since the above was in type the following has come to hand.—Ed.]

I find that, in my hurry to have my letter on grading reach you last week, I have overlooked several important points which I wish to mention. As the rules are intended for use in grading honey of all shades of color, it will not answer to use the terms "light amber" or "amber" as though they were describing defects; therefore the words, "next darker in color," should be substituted wherever I have used these terms.

Again, three terms are not enough to properly designate color in the different grades. There are at least half a dozen clearly defined shades of color between white and dark, to be frequently met with in handling a crop of fall honey; in fact, I have had occasion to distinguish nearly a dozen different shades of so-called amber honey, in handling a single lot; and while I regard straw color, as applied to that next darker than white, as the better term, and think five shades not too many to recognize, perhaps the terms "white," "light amber," "amber," and "dark," will cover the ground.

Please add to the list of supplementary defects, an empty or partly filled cell; also that, where a section would otherwise take rank in the first grade, the presence of a pronounced defect not already specified in this list shall place it in the third grade; or if it would otherwise be placed in the second grade it shall be graded as No. 2, or fourth grade. For instance, a section whose only defect is a considerable discoloration of the entire comb surface, or a still greater soiling of half the surface, or one with, say, half or two-thirds of the surface unsealed on one side; one with one-fourth part of the comb on one side half filled; or an eighth part having empty or nearly empty cells; one with a mar covering, say, a square inch of comb surface; or a crack across the surface of the comb; a section badly discolored in the wood, or considerably soiled by propolis; or one containing honey not uniform in color. Such combs are good enough for the No. 1 grade; and where the soiling of comb surface is still greater, or even half of the entire surface is unsealed, or other defects also present that would throw them into a second grade (fancy), they should be placed in No. 2 grade.

The fancy grade should be altered so as to include as many half-filled cells as unsealed ones; also as many empty or nearly empty ones as cells of bee-bread. No. 1 should include all combs firmly fastened to two sides; also as many partly filled and empty cells as

are allowable of unsealed cells and cells of bee-bread respectively. No. 2 grade—the presence of all of the defects allowable in the No. 1 grade, in any one section, should not debar it from the No. 2 grade.

Evart, Mich., July 12.

[Mr. Byron Walker is an extensive producer and a honey-seller. When his own crop is disposed of he buys largely from others, and there is not a producer in our land, if I am correct, who comes anywhere near selling as much honey in a year as does he. He is therefore eminently fitted to speak from the standpoint of both the bee-keeper and honey-seller.

Editorially I have referred to the subject of grading. The rules that I there propose were drawn up *before* the article above came to hand; and while I believe Mr. Walker is as competent as any man in our ranks to speak on the subject of grading, I can not help feel that his rules are too complicated for the great mass of bee-keepers. I should be glad to have the commission houses express an opinion on the merits of the various rules that have been proposed—that is, which set, in their judgment, would be the most practical and feasible to apply in every-day practice.—Ed.]

## GRADING, AGAIN.

### Only Two Grades Necessary.

BY F. GREINER.

I should consider it a mistake, if, in our rules for grading, Dr. Miller's proposition to establish more grades than two should be adopted. Two grades are fully enough—as many as dealers and producers want to bother with, I believe.

I have no particular objections to the Washington rules, and still would not want to adhere to them to the letter. My idea is, that fully half of all the comb honey produced by the up-to-date bee-keeper should go into the grade "Fancy;" the other half, or less, should find place in "No. 1," which, however, is a misnomer for that grade. Perfection is a rare thing to be found, and I am satisfied that these two grades should be much more flexible than our Washington formulators would have it. Let the new rules be so formulated as to conform to the honey as it really exists, and not to an imaginary product. Unless this is done, the producer will be obliged to modify them to fit his case. In my judgment, one or two cells of bee-bread do not condemn an otherwise perfect section of honey; nor would a dozen unsealed cells, nor a slight bulge caused by the knot-hole in a separator. This is getting down too fine.

When Mr. Hershiser demanded of us New York bee-keepers our product for the World's Exposition in the fall of 1892, I for one could send him only what little I had left of my crop—a somewhat imperfect lot. The next year he wanted to replace the old honey with new, which was all right, and he sent us his specifications as to what the honey should be.



He was so exacting in his demand that I could scarcely find six sections to answer in my whole crop, and, consequently, sent none at all. Consumers in general are, fortunately, not so hard to please, and will take in these little imperfections as a matter of course.

That the wood part of the sections be free from propolis, no matter what the kind or grade of the honey, need scarcely be specified; for no wide-awake honey-producer will crate his honey without first scraping the outside of the little boxes; that every sign of stain be also removed I hardly think will be necessary, perhaps not even desirable—at any rate, not practicable.

I also believe that three different kinds of honey are enough in our grading system; viz., white, amber, and dark. Good judgment will tell the shipper where to place the few sections of mixed honey; and if he classes them in with the lower grade he will neither harm the consumer nor himself materially.

Naples, N. Y., July 19.

### THE PURE-FOOD LAWS OF ILLINOIS.

#### Present Laws Strong Enough.

BY HERMAN F. MOORE.

*Mr. Root:*—In order that the readers of GLEANINGS may see what the Illinois law on adulteration is, I copy the same here verbatim:

CRIMINAL CODE, § 471: Be it enacted, etc., that no person shall mix, color, stain, or powder, or order or permit any other person in his or her employ to mix, color, stain, or powder any article of food with any ingredient or material, so as to render the article injurious to health, or *depreciate the value* thereof, with intent that the same may be sold; and no person shall sell or offer for sale any such article so mixed, colored, stained, or powdered.

#### § 473. MIXED ARTICLES TO BE MARKED.

No person shall mix, color, stain, or powder any article of food, drink, or medicine with any other ingredient or material, whether injurious to health or not, for the purpose of gain or profit, or sell or offer for sale, or order or permit any other person to sell or offer for sale any article so mixed, colored, stained, or powdered, unless the same be so manufactured, used, or sold, or offered for sale under its true and appropriate name, and notice that the same is *mixed or impure is marked, printed, or stamped upon each package, roll, parcel, or vessel* containing the same, so as to be and remain at all times readily visible; or unless the person purchasing the same is fully informed by the seller of the true name and ingredients (if other than such as are known by the common name thereof) of such article of food, drink, or medicine, at the time of making sale thereof or offering to sell the same.

#### § 475. PENALTIES FOR VIOLATIONS HEREOF.

Any person convicted of violating any provision of any of the foregoing sections of this act shall, for the *first offense*, be fined not less than \$25.00 nor more than \$200. For the *second offense* he shall be fined not less than \$500 nor more than \$200, or confined in the county jail not less than *one month* nor more than *six months*, or both, at the discretion of the court; and for the *third and all subsequent offenses* he shall be fined not less than \$500 nor more than \$2000, and imprisoned in the penitentiary not less than one year nor more than five years.

Now in regard to Ernest's "better pure-food laws" on page 493, July 1, he says, "Its first work should be to work for the passage of pure-food laws in every State in the Union where such laws are needed." Now, I am not familiar with the laws of other States, for every State is a law unto itself; but I think

here in Illinois Mr. Dadant has hit the nail on the head when he says, "Is it really necessary to have more laws than we now have to prevent the sale of *glucose* under the *label of honey*?" I will use his own words in his remarks in the above article, and say, "If such laws as are already on the statute-books were rigidly enforced" (adulteration would be almost absolutely stopped). The words in parenthesis are mine. Dadant further says, "In Ohio—because we have an energetic food commissioner," "it is very risky business to handle adulterated honey." Now, in my view the E. F. Com. above is "the whole thing." It was my good fortune, in 1887 or '88, in Tiffin, O., to listen to General Hurst, of Chillicothe, O., then the Ohio Food Commissioner. A finer, grander old man it has never been my pleasure to meet. He lectured on cold storage in keeping apples, and said that a perfectly sound winter apple could be kept five years under the most favorable conditions of cold storage as arranged especially for apples. Now, my impression of Gen. Hurst is that he made it redhot for the adulterators, and that, in my opinion, is the true and only solution of this *mixing* question here in Chicago. If we could have our own Dr. Miller as State Food Commissioner, at a reasonable salary of, say, \$3000 a year, so he could afford to give his whole time to it, I think the adulterators would soon all be in the State prison or some other prison. Under the law as it stands, prosecution must be started at the instance of some one interested, and is formally instituted by the State's attorney in each county. After the law as it stands has been given a thorough trial, if the results are not satisfactory the law should be amended so as to provide for the appointment of a pure-food commissioner.

In my opinion the only way to eradicate this evil of mixing is to go at it under the present law, with hammer and tongs—first the wholesale grocers and syrup-men and then the retail grocers. I am with this movement heart and soul. I suppose I have sold more honey to families in Ohio, Indiana, and Illinois than any other man in the country, beginning in 1887, and making for nearly ten years a specialty of it; and it is my deliberate opinion that, if adulteration and the suspicion of adulteration could be wiped out, the sales of honey for family use would be more than doubled.

Chicago, Ill., July 5.

[I had been informed, and I thought reliably, that the laws of Illinois on the subject of adulteration were so loose as to make it almost impossible to secure conviction; but I do not see how the text of the laws above given could be improved. I therefore acknowledge that Dadant was right and I wrong. As Mr. Moore says, it is not the want of a good law, but the want of an energetic food commissioner, such as we have here in Ohio. I make the suggestion that the General Manager of the U. S. B. K. U. learn who that functionary is, and then prod him up a little in regard to his duties. If he replies that there is no adulteration, let us see about it



immediately to secure samples in the open market, and have them analyzed. If they prove to be adulterated, bring them before the proper officials, and see that the guilty parties are brought to time. Mr. W. A. Selser, an expert chemist, of 10 Vine St., Philadelphia, will make a qualitative analysis of suspected honey for \$1.00. I believe it would be a good idea for the U. S. B. K. U. to set Mr. Selser at work at once; and I would therefore suggest the wisdom of the General Manager directing Mr. Moore to procure a dozen or so samples of doubtful honey, and have the same forwarded on to Mr. Selser for analysis. My! with such a law as we have above, we are foolish if we do not avail ourselves of the opportunity to strike a blow.—ED.]

### THE UNITED STATES BEE-KEEPERS' UNION.

BY SKYLARK.

*Dr. A. B. Mason:*—I send you two dollars and fifty cents as my membership-fee (two years and a half) in the United States Bee-keepers' Union—not the little Union whose income last year was only \$38.00, but the great United States Bee-keepers' Union, just born, but rushing on to manhood with giant strides—the Union whose income this year will overleap \$3800. The little Union is dying. Its death-knell began to toll at the Lincoln convention. Within two years it will be only a memory of the past. Why, then, give up the name of "Union"? We want no "league," no "alliance," no "association." We will stand by the name of "Union," so dear to every American heart. If our dying little sister society kicks—well, just let her kick her last. It will soon be all over. Then there will be but one union—defensive, offensive, and protective—a union that will make one grand army of united bee-keepers. Dr. A. B., here is my two dollars and fifty cents.

Room for you, stranger? Yes, if you are quick about it; for who knows how soon our coffers may be full? and then you would be barred out.

I might explain here that a coffer is a large hole in the ground, with an iron door and a big bulldog sitting on top of it. Dr. Mason has his whole garden planted to coffers and bulldogs, as witness the following dispatch:

Toledo, O., June 28.

*Dear, dear Skylark:*—In strict accordance with your suggestion I have planted my whole garden to coffers and bulldogs. They are coming on finely, as I am pushing them on the high-pressure-gardening principle, and the dollars are rolling in.

A. B. M.

Yes, stranger, come in; come in *now*. Your dollar and mine, with thousands of others, will do a world of good, not only while we live to enjoy the profits thereof, but long after we lie sleeping, no matter how far apart, together in the dust. Yes, come in. We will unite with the millions who are now clamoring for pure food. We will get there, and get pure honey too.

But, one will say, "What good will stopping adulteration do me? They can not adulterate comb honey, and I produce nothing else."

Well, if I were a double-gear'd idiot that is just the way I would argue; but as I have been broken only to single harness, I am not quite such a fool. Don't you know that, if adulteration is knocked in the head, and laid out for ever, it will double the price of extracted honey? And then, presto! up goes comb honey 8 or 10 cts. per pound. Won't pay you, eh? Only a dollar a year! Count even 5 cts. per pound, each year, clear loss on your whole crop, and then say it "won't pay" you. Why, it will pay a man who has only two hives and produces but 100 pounds of honey. A. B., here is my two dollars and fifty cents.

There is not a single article of food—corn-fodder excepted—that is not adulterated—many of them with poisonous ingredients—that it is at all possible to adulterate. You may not feel that it will hurt you; you have been used to it for years; you are old and tough, and a whole plug of "Battle Axe Tobacco" would hardly kill you; but what about the little prattler that is now climbing on your knee, and lisping the name of "papa"? What effect will all these poisons have on her? Are her perfect health and security not worth a dollar a year? or do you wish to wreck that perfect model of childish beauty, just fresh from the hand of God? That is just what you are doing.

Pure food means perfect health, long life, and happiness, for there can be very little happiness without health. Adulterated and poisonous food points its bony finger to the pall, the coffin, and the grave. And you won't give a dollar a year? No! but when that little angel lies beneath the daisies—when she sleeps the sleep that knows no waking in this world, the memory of that dollar will burn the bottom out of your soul, and, like Job of old, you will mourn and lament the day you were ever born.

Dr. Mason, here is my two dollars and fifty cents.

If you can't spare a dollar a year to utterly destroy adulteration, pile up your hives and burn them. They are not worth having, or you are utterly unworthy to possess them; and you call yourself a bee-keeper! You stand there and let a highway robber pull dollars out of your pockets, and can't afford a cent to buy a brick to knock him in the head. "Oh reason! thou hast fled to brutish beasts, and man alone is mad."

Dr. Mason, here is my two dollars and fifty cents.

### BEEES EVAPORATED—A NEW MALADY.

#### A Reasonable Explanation of the Cause.

BY E. WHITCOMB.

On page 479 Mr. R. C. Aikin cites what at first might appear to be a new malady among bees. Several instances have occurred within my own State. This can not be attributed to paralysis or the high winds that, during the spring, sweep over most of the plains region east of the Rockies. The honey-flow coming

from the fruit-blossoms largely induces brood-rearing. The season is so far advanced that there is no longer any condensation within the hive, and, in order to rear brood, large quantities of water are necessary.

In a great portion of Colorado the streams flow directly from the snow and ice, not many miles in the mountains. The bees go forth in quest of water, go to the streams, fill themselves with cold water, are chilled, and die. The necessity for water is constantly increasing within the hive; others go forth, and share the same fate, until the whole colony has disappeared.

A paper read by us at the Lincoln convention last year effectually covers this matter; and the complaint made by Mr. Aikin is almost identical with that occurring a few years ago in an apiary near Omaha, and which was effectually cured by water within the apiary, where the water can be tempered, as best suited to the wants of the bee, by the gentle rays of the sun.

In the case near Omaha not a dead bee could be found in the apiary; but we did find them in large quantities dead around the hydrants in the immediate neighborhood. We doubt not that bee-keepers attach too little importance to what might seem to be a very small item—watering their bees within the apiary, of furnishing water of standard purity, and of a temperature best suited to the wants of the colony.

A careful study of the hive during the spring and middle brooding season has more than convinced us of the importance of watering in the apiary.

Friend, Neb., July 15.

### THE TWO UNIONS.

Reasons Why the U. S. B. K. U. Should be Supported; a Reply to Prof. Cook.

BY DR. A. B. MASON.

*Mr. Editor:*—Will you please tell me what's the matter with our old friend Prof. Cook? It's awful hot here to-day, and I sit by an upstairs window and look out upon our apiary (it belongs to the whole family, so I say *our*; if I didn't I don't know how soon my better half would be after me with a broom), where the busy bees seem to think this is ideal honey weather, for they are busily engaged in bringing in the nectar from the acres of white clover, and acres more of sweet clover that is just coming into bloom.

It being too hot for active work I've been looking over late numbers of bee-journals, and I feel like asking the above question; for, within a few months, less or more, I've been noticing the peculiar "antics" indulged in by some of our well-known bee-keepers who have taken Greeley's advice and gone west to grow up with the country. But something seems to be wrong. Either the country has got its growth or else the climate doesn't agree with them, or something else is the matter.

Our good friend Hambaugh seems to be all right; but just look at the Rambler. He's

been drawing on his imagination for quite a while to unravel the "Mystery of Crystal Mountain," and he hasn't got it unraveled yet, and he doesn't seem likely to for some time yet; but he's got plenty of imagination left. Will you kindly keep watch of him a little, and see that he doesn't get "luny," for there's no telling where he'll finally land if he persists in keeping in the company of such a character as Alfaretta and others of his pet friends.

I might name more of our friends who show signs of having imbibed something that has changed them from what they were when living farther east.

And our old stand-by, Prof. Cook, shows signs of having acquired a disposition to disregard the rights of others, as is shown, to me, when he says on page 449 of GLEANINGS for June 15, in speaking of Mr. Newman's construing the meaning of the vote of the National Union in January last, "If so, I am not sure but, on the plea of self-preservation, we should disregard such vote." Now, please, don't let Prof. Cook get so careless and lax in his ideas of what is right as to "disregard" the wishes of those who have paid their money into the treasury of the National Union, and who also chose him as one of the Advisory Board to carry out their wishes, and not to disregard them.

Like you, I can not agree with Prof. Cook when he says there is not room enough for two organizations. There is not only as much room now as ever for two organizations, but more. The old North American was in the field when the National Union was organized, and still there was room for it, and well have the Advisory Board and General Manager occupied the field, and protected our interests. The National Union took the field because the North American didn't occupy it all, or, rather, because a line of work needed doing that was not being done by the North American. The North American and National Union were not doing all that needed to be done, so another attempt was made to enlarge the scope of both by providing that the National Union should look after honey-adulterators and dishonest honey commission men; but a large majority of its members said *no*, and, true to his old-time faithfulness to the interests of the National Union, General Manager Newman says that voice must be heard and *obeyed*; but Prof. Cook isn't "sure" but such a voice should be "disregarded." As the result of that vote, the United States Bee-keepers' Union came into existence for the purpose of looking after interests that are more vital to bee-keepers than was that of being allowed to keep bees in cities and villages, etc. The United States Bee-keepers' Union proposes to look after the interests of its members in the same way as did the National Union, and, in addition, try to make it warm for the adulterators, and for such commission-men as attempt to defraud its members.

I am sure there is room for both the National Bee-keepers' Union and the United States Bee-keepers' Union; and I am just as sure that there is no *need* for both of them exist-



ing, and, as Prof. Cook says, "the old Union has *got* to fight living issues, or die." Why not let it die? It has done its work, and done it most faithfully and well; and right here I want to commend most truly and heartily the faithful and disinterested work of General Manager Newman, and to say that I believe him to have been and still to be most truthful and honest in all he has done; but, with many others, I believe he has made a great mistake in the course he has pursued in regard to the effort recently made to take a step forward.

But a new organization has come into existence which proposes to fight, and is now "fighting living issues," and for a "kid" it seems to be doing fairly good work.

Prof. Cook says, "I fully believe that one or the other of the present organizations will die. The division is expensive; has no excuse, and the fruits of one strong vigorous organization will be abundantly greater than of two struggling feeble ones. It will be a case of survival of the fittest." I fully believe Prof. Cook is right except in his second assertion; so, why try to bolster up the old when a vigorous, healthy "youngster" is in the field to win. We care tenderly for the old and decrepit, but we nurse and watch over and help and guide the young. As secretary I have quite a respectable bank account for the U. S. B. K. U., and I doubt not General Manager Secor has a like commodity to its credit.

As regards the second statement, "The division is expensive," I will say that I have kept a little memorandum of how many and who that have sent their dollar for membership in the U. S. B. K. U. belong to the N. B. K. U.; and, having just this moment received a list of the names of those having sent their dollar to General Manager Secor, I find that about one in fifteen belongs to the old Union. So it isn't a very expensive affair after all. The old Union has the "wherewith" with which to cheer and gladden its declining years, and it seems to me that none of the members of the new Union will wish it any thing but a peaceful old age.

Many who send their dollar to the new Union were formerly members of the old, but have dropped out because it was not keeping up with the times, and are glad to aid the new Union in its important work.

Of course, but comparatively few bee-keepers will join any organization that aims to work for their benefit. They may think, and even say, that "others will do the work, and adulteration will be done away with, and I get the benefit just the same as though I paid in my money." Every bee-keeper who sells honey, every dealer in honey, and every one who buys honey to use in manufacturing, or to consume it as a delicious, healthful, and toothsome sweet, is interested in the success of the U. S. B. K. U. and its work, and *thousands* of them *ought* to send their dollar to General Manager Secor *instantly*, and have a hand in looking after their personal interest.

Before the meeting of the N. A. B. K. A. at Lincoln last October, through personal correspondence I knew where Prof. Cook stood in regard to the proposed plan of union, and he

voted against it because he "believed quite a number of the members did oppose it as unwise," and I presume a large majority of those voting against the plan did so for the same reason he did; but it always seems to me that the way to make matters move in the right direction is to look into them and decide on what is the *right* thing to do, and then do it, regardless of what others think.

Just here it occurs to me that it is a good thing to keep both Unions in a lively growing condition. I have the impression that the National Union pays but half the expense of defending a member who gets into trouble with his neighbors. If this is true, and the U. S. B. K. U. should follow the same plan, it will be a splendid thing to belong to both. A part of our apiary is located on a small city lot within a few feet of the homes of neighbors on all sides, and the rest is on a vacant lot just across an alley from the others, and families with children live on all sides; and men, women, and children get stung, but I keep the swelling down with an occasional glass or cupful of honey administered internally, at intervals, before the stinging is done.

Now, I'm a member of both Unions; and if trouble comes I expect General Managers Secor and Newman to take matters in hand and pay all the bills. Room for only one organization? Whew! Perish the thought! and all this for but a little over a dollar a year! You see the old Union has had so much honey on hand that, for several years, the Advisory Board, or, rather, the General Manager, has very kindly looked after our interests, and told us it should not cost us a cent. Don't try to kill either, Prof. Cook. Long may they both live and prosper, if such is to be the result.

Many are the good wishes that come to the new Union. Why, even its enemies are beginning to wish it well—even the editor of one of our bee-journals, who has admitted to its pages most uncomplimentary and scathing articles in regard to the new Union and some of those engaged in forwarding its interests, your humble servant included. A letter received a few days ago in regard to the coming Buffalo convention closes with this sentence: "Wishing the new Union much success, and members a good and profitable meeting, I am, etc." That shows the right spirit.

It seems to me to be hardly necessary to suggest, as Prof. Cook has done, that the members of the old Union write "to Manager Newman . . . to grapple with the question of adulteration in California." We have an organization, one of whose objects is to "grapple" with that very evil; and if Prof. Cook and others will suggest such a course to Manager Secor I've no doubt he'll look after the matter, and so not divert the money now in the treasury of the National Union from the purpose for which it was paid in, and no vote will need to be taken.

Your comments on Prof. Cook's article are very good indeed; and when you say that A. I. Root, one of the directors (Advisory Board) would be in favor of having the old Bee-keepers' Union "take up the line of work suggest-

ed" by Prof. C., you're but telling where he has stood all along; but it seems to me he ought to change that standing now. The old Union has overwhelmingly said that it did not want to spend its money in that kind of work, and I don't believe it's right and honest for the Advisory Board to disregard its wishes.

There is room for both societies. Let each attend to its special line of work, and all will be well.

I voted to have the old Union with its old and experienced staff of officers do just what the new has been organized for; but the majority said "no," and I hope the Advisory Board will be as conscientious in the matter as is General Manager Newman, and heed the Union's voice. Put me down "no" as regards the professor's plan. It would be much more difficult now to unite the two Unions, with their two sets of officers, than it would have been to unite the National Union and the North American.

I am glad Prof. Cook believes in doing the work the United States Bee-keepers' Union is doing and intends to do; and if he will turn his energies and money to building up the new Union, instead of trying to divert the course of the old into new channels, he can do much toward accomplishing what the old was not intended to undertake.

I know this article is getting to be rather lengthy; but I've tried to be brief, and I have much more I'd like to say; but I'll mention only one more matter. In the *American Bee Journal* for July 1st, Prof. Cook says he "was opposed to changing an organization . . . unless the members were pretty unanimous in the desire for such change;" and now in the last issue of GLEANINGS he is not sure but the Board should disregard such a vote. Where is Prof. C. at? Don't "disregard" the wishes of the old Union's members, professor, and we'll feel as kindly toward you as we always have.

Station B, Toledo, O., July 5, 1897.

[A. I. R. has stood right along just where your humble servant has stood. It was I who suggested to him, a member of the Advisory Board, the propriety of favoring the scheme proposed by Prof. Cook. I thought it would do no harm, and *might* in a measure help to soothe the soreness of those who can see no need of the new Union. Then, again, it seemed to me that we should place no obstacles in the way of the old Union's taking up the fight against adulteration, providing it should see fit to do so. There is a very big field along this line for both Unions, and they will not step on each other's toes even if they do fight the same enemy. However, whatever energies I have (and I am sure A. I. R. feels the same way) should be devoted toward helping the youngster that is now making such a sprightly growth. In this connection it is really painful to see how bitter Mr. Newman feels toward some of his old-time friends because they venture to offer honest criticisms on certain policies that he has seen fit to carry out. He has construed these criticisms as reflections upon his integrity and honor. No such idea, I am sure, entered the head of Mr. York or Dr. Mason, or of anybody else.—ED.]

## NOTES BY THE WAY.

BY J. T. CALVERT.

My first day's journey brought me to Indianapolis. All along the way I was most forcibly impressed with the abundance of white-clover bloom. Through all the pasture lots it spread like a white carpet. The grazing cattle and horses seemed to leave the blossoms, and eat the leaves and other grasses. After passing over one or two States, and seeing the very abundant white-clover bloom, I no longer wondered that all the dealers and manufacturers of bee-keepers' supplies were crowded to their utmost, and somewhat behind on orders. It has been years since white clover has been so abundant and so general.

At the depot to meet me was our genial friend Walter S. Pouder, of Indianapolis, with whom I spent a very pleasant half-day. He is very conveniently located at 162 Massachusetts Ave., the store reaching back to New Jersey St. Mr. Pouder has been developing the trade in honey and beeswax in Indianapolis till he has built up a very nice trade. He sells all the beeswax he receives, right at home. Quite a little for the drug trade is put up in 1-ounce cakes, 40 cakes to the box, and sold at \$1.00 a box. Honey is sold largely in square jars; and if it becomes candied before the retailer sells it, it is exchanged for that which is liquid. With the abundant crop of honey that we are sure to harvest this season, there is all the more need of developing the home market. By fair and liberal dealing, and being careful to sell only choice well-ripened honey of uniform quality, many have built up a demand in their own neighborhood, which continues from year to year, and increases with the years. What many have done many more can do.

As Mr. Pouder has but one hive of bees he has to buy his supply of honey from bee-keepers who have a surplus. Much of it he takes in exchange for supplies, for he is also the principal supply-dealer of Indiana, and is prepared to supply the wants of bee-keepers throughout his State.

As I journeyed westward across the States of Ohio, Indiana, Illinois, Missouri, Kansas, and Colorado I noticed the crops more and more advanced. The wheat which was still green in Northern Ohio was golden in Indiana, and being harvested in Illinois. In Kansas the fields were already stripped; and, such extensive fields! We have been hearing for the past few years of poverty-stricken Kansas. If the most of the State compares with what we passed through from Kansas City west over the Santa Fe R. R., they should have no reason to complain, especially if wheat continues to bring the good price it has during the past year. It is no doubt having a reaction from the feverish booms of past years, but is bound to have a steady permanent growth in the years to come.

The plains of Western Kansas and Eastern Colorado are for the most part a barren waste, with very scanty vegetation. As we near the Rockies, where water is available for irriga-



tion, there is a marked change. Alfalfa is largely grown, and, as a consequence, considerable honey is harvested. As I visit this region on the return trip I will refer to it again later on in these papers.

San Francisco, Cal., July 10.



#### BEEES DESTROYED BY WORMS.

*Question.*—Going out among my bees the other morning I saw two worms at the front of one hive and three at another. I told a neighbor of this and he said I would have to look out or the worms would destroy my bees, as he lost several colonies in that way some years ago. Are there any worms which will destroy bees? If so, what are they?

*Answer.*—A good colony of bees is never destroyed by any worms which we have in these parts, and I doubt if there are in any part of the world. Such expressions as your neighbor gave voice to show the ignorance of very many regarding the enemies of the honey-bee and their lack of having studied upon the subject.\* However, as such statements tend to make the beginner fearful of loss of bees from the ravages of the larvæ of the wax-moth, it may not be amiss to treat the subject a little now and then in our bee-papers, explaining the workings of this larva and the only fear we need have of it. In the first place, permit me to say that no one will make the assertion that they have lost bees from moth-worms unless that one is either ignorant or careless, or both. The carelessness of such people is shown in that they do not attend to their business as they should, so they do not discover that their bees are gone till the combs are destroyed by worms; and they show their ignorance, because, if well posted in all that is going on inside the hive, at all times, they would know better. I do not propose to tell here what a wax-moth miller is, how the miller or the larvæ look, how the miller succeeds in getting her eggs in the hive, etc., for this can be found in any of the books on bees and bee-keeping. If any have not one of these books, my advice would be to get one at once, for you can not well understand much that the columns of GLEANINGS contain unless you know the first principles of bee-keeping. One who can not afford a book can not well afford to keep bees, as the loss of an ignorant person with two colonies during one year is much more than the price of a book; and yet thousands attempt to keep bees without a bee-book or a bee-paper. One thing is certain: In most localities where bees can live, if the combs are not occupied with bees, and have not been exposed to a degree of cold as low as 15 degrees above zero, when warm weather comes in the spring to stay we always find the larvæ of the wax-moth upon the combs the most abundant on those which have pollen in

them, or have had many generations of brood reared in them. When once under headway it takes but a short time to reduce the combs in a whole hive to a mass of webs. Now, the worms can not come into full possession of these combs so long as there are bees upon them, although we find here or there a worm which may have eluded the vigilance of the bees by getting in the septum of the comb, under the brood, or by being under the capping, over the heads of the immature bees. But even here they are secure for no certain length of time; for before they reach maturity they are ferreted out and cast from the hive like those our correspondent saw at the entrance of his hive. The Italian bees keep these worms out much better than either the hybrids or blacks—a handful fully protecting a whole hive of combs, the worms being kept in submission so long as a few score remain. If from any cause a colony becomes hopelessly queenless, the bees all die of old age in from fifty to sixty days from the time the last bee hatches, if in summer; and as soon as the bees are gone there is no restraint on the worms, thus giving them full sway, and in a short time the combs are ruined.

Did the worms destroy the colony? Certainly not; the colony was destroyed by the loss of the queen, spring dwindling, or whatever the cause was, and the moths came in as an effect. Thus we see to talk of worms destroying colonies of bees is fallacious. If we are not extremely careless we shall see from outside observation that something is wrong with any colony, long before the moths can take possession of the combs, even if we do no general manipulation of hives; and as soon as we see that something is wrong with any colony it is our business, as apiarists, to open the hive and find out what that wrong is, in time to save the colony. But it frequently happens that we lose a part of our bees during the winter or spring, and wish to preserve the combs till the remainder of our bees increase to occupy them, for such combs are of decided worth, even in these days of comb foundation. To keep them from being spoiled, if not entirely destroyed, by the moth-worms, requires close watching, and all should be looked over as often as once a week when warm weather comes. As soon as many worms are seen, hang the combs in a small close room, so the fumes of burning sulphur can penetrate all parts of them, and burn one pound of sulphur to every 100 cubic feet contained in the room. To burn it, get an iron kettle, put some ashes in the bottom, put in a shovel of live coals from the kitchen fire, and pour on the sulphur. Shut the door and leave for two or three days, when every thing that inhabited them will be dead, unless, perchance, some of the eggs may remain unhatched. If kept from the miller it is rarely the case that they will need looking after again; still, I have sometimes had to sulphur again in two or three weeks.

There is one thing that all can do to prevent the moth nuisance, and that is, keep every bit of comb not covered by the bees in this sulphur-room or else in the wax-extractor. To

allow combs to lie around till they become a breeding-nursery for thousands of these pests is something that many of our apiarists who are practical in other ways are guilty of. In the apiary of a man who raises honey by the ton I once saw combs by the score literally filled with moth-webs and cocoons, moths being raised to go out and curse the bee-keeping world all about. Let us not be guilty of these things.



#### HONEY SEASON NOT SATISFACTORY.

The honey season has not been satisfactory with me. Clover yielded only moderately—enough to give our bees a good start in the sections. Now basswood is out in bloom; but our bees are killing off their drones, and the honey season seems at an end. I can this year record what in all my experience I have never been able to before—not one swarm in June. Even the 4th of July passed by without one swarm coming out.

Other parties, within three or four miles of me, and others at a greater distance, I hear speak of a very fair yield, but only few swarms. A good deal of buckwheat is sown here this year as usual, and the rains are bringing it on wonderfully. This may help us out; at any rate, we are making great calculations on it.

Of course, we intend to go to Buffalo, and we hope to see a number of the noted beekeepers of the land there. Especially do we hope to see as many of the inhabitants of Rootville as possible.

FRIEDMANN GREINER.

Naples, N. Y., July 19, 1897.

#### DRAWN COMB VS. FULL SHEETS OF FOUNDATION.

I am now taking off the Hilton supers filled with white-clover honey. I am using them on the new Dovetailed hives. It is just fun to handle them, for they come off as clean as they went on—no burr-combs on sections nor on tops of brood-frames. I don't see how Mr. Danzenbaker can do any better than this with his complicated arrangement and paraffine paper to boot. I say as I have said regarding the new self-spacing Hoffman frames, "If this is not the *best* arrangement for comb honey, it is certainly good enough." For extracting I should want four dovetailed bodies full of comb for each working colony, allowing the queen the exclusive use of the two lower ones.

Drawn combs in sections have fallen a notch in my estimation this season. I had quite a lot of them, and put them on first; but I am compelled to confess that they were not filled and sealed as promptly, nor does the finished section look nearly as well as those filled from full starters of extra-thin foundation. Now, why is this? Well, in a good steady honey-

flow, such as we have had, the bees need nothing better than foundation in order to fill and seal their sections promptly. Give them combs with cells of any depth, and they will fill them up with their unripe honey, and have to wait so long before it is ripe enough to seal that those furnished with starters are finished first and look best. I know that drawn combs are useful sometimes, and I have used a great many of them; but given such a season as this, with such a honey-flow, I do not want them at all. As far as coaxing bees up into the sections is concerned, I never had to do it yet. If you have a populous colony and a good honey-flow at hand, they will take immediate possession of the super without the aid of bait-combs.

Without those two factors there is little use of trying to work for comb honey. My experience has led me to the conclusion that drawn combs are not so all-important as some would make out.

H. LATHROP.

Browntown, Wis., July 12.

[The drawn comb referred to must not be confounded with *drawn foundation*, which is another thing. That to which Mr. L. refers was comb, as I take it, drawn out from foundation of the previous season. He does not say whether it was leveled down *a la* Taylor or not. As between drawn comb and drawn foundation, there would probably be little difference. If the latter were made 15 ft. to the lb., as we have made it, with walls only one-eighth inch deep, the comb honey would be of a finer quality so far as the comb is concerned than that built from foundation in full sheets running from 12 to 13 feet to the lb.—Ed.]



#### DISH RIGHT SIDE UP.

I find my sections are all nearly filled now, and basswood, the source from which I usually get my entire honey crop, will be blooming in four or five days, and I shall not be in readiness for it; therefore I order by express. Basswoods will be fuller of bloom than I ever saw them, and the prospects for a good honey-flow are very flattering indeed. I want to get my dish right side up.

T. K. MASSIE.

Tophet, W. Va., June 30.

#### BEEES FILLING SUPERS AS IF BY MAGIC.

The bees are almost getting ahead of me this time. I got 3000 sections and 20 lbs. of super foundation of you this spring, and had 2000 sections on hand from last season, of which 1000 were filled with drawn comb from last season, and I am just about caught up now. I never saw such an abundance of white clover as we have this year. The bees are filling supers as if by magic. About half of my bees have swarmed up to date.

Trail, O., June 24.

AMOS MILLER.





RED was greatly surprised, upon going beyond the clump of sycamores, to find the doctor with his horse and Sam's saddled and bridled as if ready for a journey.

"Why, doctor," exclaimed Fred, as he hastened forward, "what does this mean? Are we to break camp now and get to Prof. Buell's in the early morning?"

"Oh! no, Fred. Sam and I thought we would take a little journey on our own account; but first I wish to talk with you;" and the doctor leaned against a sycamore, folding his arms across his breast as though to hold together all of his powers. "I have been thinking much of late of my position and condition in the world's affairs. I feel that, at my age, and with my habits of life, it is impossible for me to conform to the usages of the ordinary so-called civilized community; and, furthermore, I have searched for years for a daughter, and fondly hoped that, when found, I should also find a daughter's love; but, Fred, having found that daughter, I do not find a daughter's love; and I never—no, never—shall. She loves her supposed parents, and, in fact, they are parents to her in all except the matter of birth. To step in now and reveal myself as her father would be a cruel blow to her happiness. Do you see," said the doctor, with greater earnestness, "how her eyes brighten and her face glows at the thought of meeting her parents? how she thinks our pace slow? and, had she wings, how she would fly to the home that shelters those she loves? And I, should she know of my relation to her, at the best I should merely have respect—an uncle's or a cousin's love. No, Fred," said the doctor, in a decided tone, "I can endure no second-rate love. The fates have decreed that this should be so, and now I should feel especial dishonor to stand between Alfaretta and those whom she holds dear. I can cherish the memory of having found her, and of being instrumental in restoring her to mental health. And now, Fred, you must know that my plan is to go far from this place, where I can surround myself again with animal life, and live in quietness. Convey to Mr. and Mrs. Buell what I have told you, but never reveal to Alfaretta the relationship that exists between us. Let me remain to her as Uncle Ralph. And now, Fred Anderson, farewell."

While the doctor was talking, Fred's emotions were first surprise, then grief; and when the doctor mounted his horse he could scarcely control himself. His words of appeal fell upon deaf ears; and finally, as the doctor

moved off, Fred's words of farewell were broken with sobs of genuine grief, for he had learned to love this unselfish man. Sam Johnson silently gave a parting hand-shake, and Fred was left alone.

Slowly returning to the camp-fire he stirred the dying embers to a flame, and sat for a long time musing upon the strange events through which he had passed during the past two years. Sleep did not come to him any more that night. The coyote set up his indescribable yelp not far away, and an owl screeched and screeched in the sycamore-tree, but Fred heard it not; he was living in another realm. He arose, finally, and said to himself, as he looked toward the little tent, "If I do not soon win this woman's love I too will follow Dr. Hayden."

The little tent soon showed signs of life, and at an early hour Alfaretta emerged from it. She had been informed that she was but half a day's journey from her home, and her excitement increased, and she was impatient to continue the journey.

Her first comment, upon emerging from the tent, was, "Why, Fred Anderson, how solemn you appear. You look as though you had lost your best friend." The next moment she said, as she surveyed the camp, "Where is Dr. Hayden?"

"If the expression of my face is so sad that even your presence can not enliven it," said Fred, "then I will say that we have both lost an excellent friend;" and he related the episode of the night.

Alfaretta's surprise was great, and her chagrin greater; "for," said she, "I had anticipated so many pleasant things for him; how full of joy, and how grateful, my parents would have been! and I would always have loved him as my dear Uncle Ralph. But, what a mysterious man! and, Fred, I dreamed last night that he looked into my tent and gazed a long time upon my face, and then floated away up like a cloud."

"I reckon yer dream was all true, 'cept the cloud," said Gimp; "fur I seed the doctor a looking inter the tent."

There was not much relish for food that morning, except by Gimp. Camp was broken, the donkeys packed; and as they proceeded on their way Gimp finished his breakfast from remnants he had tucked into his pockets. Trouble was not allowed to interfere with his gastronomic affairs.

Alfaretta—how radiantly beautiful she appeared! The flush of early morning exercise upon her cheeks, her eyes sparkling with joyous anticipation, erect and alert, to Fred's

eyes she was the very embodiment of health and loveliness; and he, with many conflicting emotions passing through his mind, rode for many miles with but little conversation between them.

This silence might have continued through the remaining portion of the journey; but after crossing the Sacramento River the road led diagonally up a steep bluff. Alfaretta's pony was upon the outer edge of the grade, and at one point the embankment was supported far below by log-work. The earthquake had evidently loosened the logs, and the tread of the pony caused the embankment to slide down a few feet. It was not much of an accident—rather more startling than injurious. The pony made a desperate struggle to regain the roadway. Fred, whose horse was close in on the grade, and not caught in the slide, leaped from his horse and was by Alfaretta's side instantly, and aided the pony to gain the roadway.

"My!" said Alfaretta, trembling; "how it frightened me! but I didn't shriek, did I, Fred?"

"Oh, no!" said Fred; "you are too brave a girl for that."

A little further along, after regaining her composure, she said: "How good of you, Mr. Anderson, to again guide me out of peril!"

Fred felt a little chill at the words "Mr. Anderson;" but having a resolve in mind he nerved himself for the effort of his life, and said, in a low, earnest tone, "Alfaretta, would that I could be your guide through all of your life. You are going to your home with joy; let me have the great pleasure of going with you, hand in hand, for weal or for woe. If I have been your guide in dangerous places, you now by one little act can requite it a thousand fold. I close my eyes and reach out my hand, tempting fate."

Fred's horse was near Alfaretta's, and for a moment he felt suspended between heaven and earth; every beat of the heart seemed an age. Would she clasp his hand? The thought of her refusal caused him in imagination to sink down to unutterable depths of despair. But, oh the rapture! Could he believe it? her hand sought his, and now the thrill of joy lifted him as far above the earth as, a moment before, he was below it. Clasp! Alfaretta's hand more closely, he opening his eyes, and looking upward, said, "Oh sunshine! how glorious! how grand the great dome of heaven! how beautiful the earth, radiant with floral gems! how sweetly sing the birds! and the very winds breathe music through the trees; but far above all these the love of woman rules and beautifies the world. Without that love it would be a barren waste indeed;" and he raised the hand to his lips and kissed it.

"Well, I declare, Fred," said Alfaretta, "you are getting decidedly sentimental. I really believe we are on earth yet, though."

"That may be," replied Fred, "but it has suddenly become a new earth to me."

Their conversation was here interrupted by the arrival of Gimp, whose horse came up on a lope. He had been interviewing the operator of the ferryboat about the fishing; and

before he was near them he shouted, "They say the fishing is purty good along this yer river now."

"That may be," said Fred, with a smile; and, turning to Alfaretta, he said, "Then you remember nothing about pulling me from the river with the fish-pole, and calling me Mr. Pickerel?"

"Nothing whatever," replied Alfaretta; "it is all a blank to me, as well as any remembrance of the lovely home you say we have on this river."

"Yes, Alfaretta, it is a lovely home; and when we reach yonder bend you shall see it. Over yonder," and Fred pointed across the river, "is the Ghering ranch; and that white-appearing rock out in the tules is all that remains of the bluff upon which I had my neat apiary and beautiful honey. Why, as I look across I feel almost like shouting for Matt Hogan."

"And to think what ill luck you have had with bees—this apiary washed away, and those hundreds of valuable swarms overwhelmed in the valley! Fred, I think you should give up all idea of keeping bees."

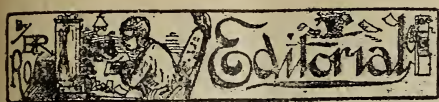
"Oh, no!" replied Fred; "all of these discouragements have given me training for better work in the future. I believe I can now fit up the most scientific practical apiary in the country; at any rate, I am anxious to try it. But here we are at the river bend. Now for your first glimpse of home through sane eyes; but what is the matter, Alfaretta? You look pale; please be a brave girl now, and control yourself."

"I will try, Fred; but you scarcely realize that it is over five years since I saw my people to sanely remember them, and all of these years of anxiety and sorrow must have wrought changes. I shall not see the same parents I saw five years ago; and are they at home? are they alive, Fred? are they living here? Oh the conflict of these thoughts!"

"Courage, dear; we shall soon know all; see, there is smoke from the chimney. Somebody is waiting for you."

*J. U., Neb.*—Perhaps you have not seen a sample of the drawn foundation. We have made some that runs 15 feet to the pound, with cells  $\frac{1}{8}$  inch deep. When the cells are  $\frac{1}{4}$  inch deep it runs about 11 feet to the pound. Even this is nearly as light as thin foundation, but heavier than extra thin. But our thinnest drawn foundation is lighter than any foundation that has ever been made having any wall. The drawn foundation running 15 feet to the pound is very much lighter than the extra-thin foundation, which is only 13 feet to the pound. Perhaps you have been relying on statements made by those who oppose the new drawn foundation. If you have, we would suggest that you send and get some samples from our latest dies. If the new drawn foundation should come into general use, if we made it as light as 15 feet to the pound it would take much less wax than foundation does at present.





THE officers of the United States Bee-keepers' Union have gotten out a very neat and elaborate program for the Buffalo convention, to take place Aug. 24-26. This program contains, besides, nine special songs, the music and words of which were gotten up by bee-keepers. These programs are to be sent free to all members of the Union; to all others a nominal price of 5 cents will be charged. Address the secretary, Dr. A. B. Mason, Station B, Toledo. The music is simply delightful. Send for a program, and try the music in your home.

#### FREE HONEY-LEAFLETS.

IN order to help bee-keepers sell their big crop of honey we have decided to furnish, during the month of August, honey-leaflets free, in quantities not to exceed 500 to any one person asking for them. But to be eligible to this offer the person must be a subscriber or have ordered goods of us at some time during the season. He must also pay express or postage. If the leaflets go with other goods, there will be no charge to pay. I am so firmly convinced that they will do good work where distributed among grocers and consumers that we are constrained to make this offer. Let the orders come in—the more the merrier. Postage on 500 leaflets will be 50c; on 100, 15c.

#### THE ADVANTAGE OF BIG COLONIES.

I HAVE said a good deal regarding the advantage of large colonies being non-swarmer, and the kind that produce honey. Experience this season, as well as last, has pounded the fact into my head more firmly than ever before. The Dadants have long been exponents of big hives and big colonies; and while I believe they are exactly right in urging the importance of having powerful stocks of *bees*, I am not yet prepared to believe that a large hive all in one brood-nest is essential. During the past season we have secured largely the same result as do the Dadants, with our two-story eight-framers; namely, no swarms and 100 lbs. of extracted honey on the average, per colony, and 50 lbs. of comb honey. The single-story eight-framers swarmed, and in some cases gave us 25 lbs. Hard facts and figures like these are worth a bushel of theories. In addition to the two-story colonies we have a few three-story and one four-story; the last named holds two *big* swarms. If they had been at the out-yard instead of at the home yard, that is greatly overstocked, we should have secured some results.

#### THE DADANTS ON BEES HANGING OUT DURING THE HONEY-FLOW.

WE are at present enjoying a visit at the Home of the Honey-bees from Mr. Louis Dadant, son of C. P. Dadant. That is to say, he is a son of the "son" of Charles Dadant &

Son. He reports that they have had an excellent foundation trade this season, as well as a good honey-flow. One of the first questions I asked young Dadant was whether they had been having any swarms.

"Not a swarm this season," was the reply, although they had 80 strong colonies at the home yard.

"Do your bees ever hang out?"

"Yes, sometimes, if we do not keep ahead of them and give them sufficient room. But when they cluster out in front we raise the hives off the bottoms, thus giving them ample ventilation. This starts the bees to work."

This is in line with what I said in our last issue in regard to bees hanging out. It will be remembered that the Dadants have few or no swarms, and this fact speaks volumes for the advantage of having large colonies. But I shall have something more to say on this question, in another column.

#### MORE FISHBONE IN NATURAL DRONE COMB THAN IN COMB BUILT FROM FOUNDATION.

WHEN the question of the new drawn foundation came up, some opposed its introduction, on the ground that it would make more fishbone in comb honey, and even went so far as to condemn the practice of using full sheets of foundation in place of narrow starters, as they averred that the former made too much "fishbone." I never had a question but that full sheets of foundation would result in a heavier midrib than ordinary natural built comb; but if our experiments and observations, as reported in our last issue, mean anything, it would appear that there is actually *less* of the objectionable article in comb honey from the use of full sheets than where only narrow starters are used. If the bees would build *worker* comb in place of drone comb, after extending beyond the narrow starter, then the results might be different. It would look as if the talk, to the effect that the comb honey of our fathers (as a general rule drone comb) was better than the comb honey of the present day, were based more on theory than on experience or observation.

#### EXTENT OF THE CLOVER HONEY-FLOW; A BIG YEAR FOR SUPPLY-DEALERS.

MR. W. A. SELSER, the honey-man, of No. 10 Vine St., Philadelphia, called on us recently. He had been out west buying up honey; and he reports that the honey season, while fair in Minnesota, Iowa, and Wisconsin, was not as heavy as in other States in the North. Basswood had been to a great extent a failure, while clover did only fairly. Mr. M. G. Chase, of Whittlesey, said last week he had a sort of feeling that the honey season would not pan out as well over the country as we had at first expected. He urged that, if the crop was not to be a big one, the report that it would be would demoralize commission men so that they would not dare to make prices; and so if they quoted at all they would quote low. This, he thought, set the pace for the rest of us. There may be something in this.

On the other hand, if we can judge the hon-

ey season by the flood of orders that has come in, the flow has been the greatest in extent and duration that we have ever known. Here we are up to this date, July 24, running night and day, machinery and engines strained to their utmost, and we expect to run nights another week. Usually our rush of business is all over by the 1st of July. We began running night and day the last week in April, and during this time we have employed the largest number of hands we have ever had in our experience. As nearly as we can learn, our brother-manufacturers have also had a heavy run of business, all of which goes to show that the season of 1897 will go down into the records as being one of the best that bee-keepers have ever known. Prospects are exceedingly bright for another season.

#### OVERSTOCKING AT THE HOME OF THE HONEY-BEES.

We have 300 colonies and queen-rearing nuclei at the home yard, and 40 full stocks at the out-yard. It was evident from the very first, as I stated, that the bees away from home were doing altogether the better work. Only a few comb-honey supers were filled and capped over at the home yard, while at the out-yard every one of the colonies was in the supers for all they were worth. The out-bees would fill a super in about a quarter of the time the home bees did, providing they did any thing at all. Another fact is, that the home yard is at the present time just barely holding its own. Indeed, they are ready for fighting and robbing. The out-bees are still gathering honey and capping sections, at least they were on the 23d.

All these results would naturally be expected; but it goes to show that the number of 300 colonies and nuclei is overstocking our home yard with a vengeance. It is probable that the out-yard would take at least another 40 colonies, without very much detriment to those already there.

#### AN IDEAL LOCATION FOR BEES.

FOR myself, at least, I have decided that the ideal place for an apiary is in an orchard, where there are low-spreading trees. If the queens' wings are clipped, there will be comparatively little climbing after swarms. Some prefer shade-boards; but after having tried both, for the comfort of the apiarist and that of the bees I decidedly prefer the shade of low-spreading trees. Grapevines do tolerably well, but they do not protect the apiarist; and at this time of the year, when the shade is most needed, they are sending out shoots and branches that interfere with the handling of the hive; and grapevines do require an excessive amount of trimming just at the time bees need the most attention. The colonies at our out-yard are placed in groups of three on the north side of the low-spreading basswoods. It is a great comfort as well as a pleasure to work among these bees compared to what it is in the home yard with the grapevines. Vernon Burt has his apiary in an apple-orchard, and the grass is neatly kept down by sheep that are allowed to run among the hives at will.

The lawn-mower does not begin to compare with them.

#### L. L. LANGSTROTH.

I AM informed that as yet no tombstone has been placed to indicate the spot where the remains of our old friend and benefactor rest. Now, while I would not recommend extravagance in this matter I certainly do think the bee-keepers, not only of America, but of the whole world, would gladly give something to have a proper stone furnished. I am told that \$50 has already been subscribed; but to my mind, all things considered, this is hardly sufficient. If those who have enjoyed and been profited by father Langstroth's writings should contribute only a *dime apiece*, it would be enough and *more* than enough; and I am sure bee-keepers would willingly do this. In fact, if I am correct most of them would feel it a privilege. The only difficulty is to get the matter started, and to let people know about it. I myself will gladly give \$10.00; and if enough is not raised to pay for a fitting monument, I will do more. Send the money to us and we will see that it is properly credited; but send as much more than a dime as you can afford.

And it occurs to me just now that some of our able men, friends of our benefactor, should meet together and suggest a suitable inscription. I have not consulted any one in regard to the matter, but I should like to have Dr. Miller and Manager Secor, and anybody else whom they might choose, get something appropriate for the tombstone. The whole wide world knows more or less of Langstroth; and people who visit the cemetery at Dayton, Ohio, will look up the place and will read with interest the inscription. When I was down east it gave me a rare thrill to be shown the burying-place of Noah Webster, the father of our old "elementary spelling-book." I can not remember just how expensive a stone it was; but I was not only delighted to see it, but to tell the friends after I got home that I stood by the tomb of this, that, and the other great men whose memories we love and revere. Now, then, when you are writing us tell us what your mite toward the fund shall be; and if you can not all see the stone, and read the inscription, we will try to give you a good picture of it in GLEANINGS.—A. I. R.

#### GETTING BEES STARTED INTO SECTIONS; THE ADVANTAGE OF POWERFUL COLONIES.

WE have had quite a number of inquiries as to how to get bees to go into sections. Some have said that their hives were full of honey, but the bees would refuse to go to work above. The main trouble in most cases is that the colonies are probably not strong enough. If they can only comfortably fill the brood-nest they may not go into the supers, even if honey is coming in freely. Hives should be fairly *boiling over* with bees. With this condition, and a fair honey-flow, there ought to be no trouble in getting work started in the supers. But it is always advisable to put in a partly finished section or sections from last season, or, better yet, from another colony in the same



apiary, that is working in the sections. These we call "bait-combs," and every wise apiarist will put one or two of them in the center of his supers along with sections containing *full sheets* of foundation. The average bee-keeper can not afford to use narrow starters.

A great deal of stress has been laid on the importance of putting in bait-combs to start the bees up; but a greater stress should be laid on the importance of having big rousing colonies. The hives should be "shoost cramm't cham full" of bees; then when supers are put on, the bees will go into them. When *once* here they won't loaf long if honey is coming.

#### SHEEP TO KEEP DOWN GRASS IN THE APIARY.

A few days ago Louis Dadant and I called at Vernon Burt's. He was away at the time, but we strolled into the yard nevertheless. Quite a flock of sheep were busily nibbling around among the hives. I had supposed that Mr. Burt allowed them access to his apiary only at night; but latterly, at least, it would seem that he lets them go among the hives day and night as much as they please. I saw some sheep nibbling grass close to an entrance. Did the bees make any fuss about it? Well, yes, but the creature did not seem to mind it. One old woolly chap I noticed was walking across the apiary at a little quicker pace, with his head quite low. By looking carefully I saw that a lot of bees were after him. He plunged his head into a clump of twigs, and wiggled his stump of a tail in a show of self-defense. He shortly drew his head out, and went to nibbling grass around the hives as though nothing had happened. Another sheep seemed to be stung in the face, but paid very little attention to it. Just imagine a cow or a horse or a donkey, with bees after them, among a lot of hives! No cartoonist has or ever could fitly represent the "scene." Thick heavy wool protects so that, I believe, they are rarely stung; and even when they are, as I said, they pay no particular attention to it.

I don't believe there is any thing equal to our woolly friends to keep down grass and weeds in an apiary. It takes lots of time and hard work to do an equally good job with the lawnmower. At our home yard there is an open roadway over which considerable basswood lumber is hauled, and more or less general teaming is done. Were it not for this fact I should be in favor of having a flock of sheep to keep the grass down in our apiary.

#### GLEANINGS PRINTED ON NEW TYPE AND ON A NEW PRESS; SOMETHING ABOUT THE PRINTING FACILITIES AT THE HOME OF THE HONEY-BEES.

Our readers will notice that this issue is printed on a new dress of type, the old having become so much worn as to make a change necessary. It is also printed on a brand-new Campbell Century four-roller book and job press that has a guaranteed capacity of 2200 impressions per hour, or a normal rate, including stops, of about 18,000 printed sheets in a

day of 10 hours, each sheet having 16 pages of GLEANINGS matter on a side. This machine cost us \$2500 in cold cash.

Our printing department has been so crowded during the past year that we had to have something better; as it was, the old press ran night and day from about the first of January to the middle of May last. We have realized for some time also that it has taken too long for us to run off an edition of GLEANINGS. With the old press it took from four to five days; but we expect with the new machine, as soon as our boys learn to feed it to its full capacity, to make the run in something like a day and a half, or possibly less.

Besides the printing of our journal we have from 150,000 to 200,000 catalogs to print, of our own, every season; for we believe heartily in the principle that we must let the world know that we have something to sell. Then there is our A B C book and several rural publications. Besides this there is some outside printing. The consequence is, we have found our capacity heretofore to be so limited that we found it necessary for us to buy the very best and fastest printing-press that could be found in the market; and after a good deal of investigation it proved to be the new Campbell Century—a press that is now almost working a revolution in printing-presses. I believe there is no one other *book* and *job* press of its class that can equal it in speed day after day without "playing out."

Good by, old press! good-by, old type! and welcome new type and new Century and progress! While GLEANINGS does not claim to be the *best* bee-journal in the world, it has a right to claim that it "keeps up with the procession," both in subject-matter and in letter-press work. Besides this we shall continue to bestow, as in the past, extraordinary care upon our proofs.

#### THE NEED OF STANDARD GRADING-RULES; A SHARP TRICK OF THE TRADE.

It begins to look as if it were impossible to find a set of rules for grading that will suit even the experts in bee-keeping. Some even go so far as to think it better to have no rules, and let each one grade according to his own notion. The obvious disadvantage of this is that one lot of honey can not be compared with another. A's "Fancy" would be B's "No. 1;" and C's "Extra Fancy" might be D's "Fancy." We must somehow strive to arrive at uniformity. Without grading-rules a commission house can *sell* B's honey as "Fancy," and make him returns for the honey at No. 1 grading. By this way they can actually steal the difference between the price of No. 1 and Fancy. Yes, even with a standard set of grading-rules they could carry on this sort of stealing, but it is not nearly as easy to do so; for with standard rules each party would know what he is talking about; but without rules the bee-keeper is at the entire mercy of the commission house. I regret to say it, but I fear that the practice of selling at one grade and making returns to the bee-keeper at a lower grade is more common than it ought to be because it is so easily done and

so difficult of detection. A good set of *standard* grading-rules would be a great bar to the practice.

#### GRADING-RULES FOR HONEY.

UP till within a few days preceding the 15th of July, not a single postal or letter had come to hand indorsing or criticising the grading-rules that were proposed by Walker, Miller, and others in the July 1st issue. Before Mr. Walker's article was received, and which is published in this number, I tried my hand at grading—that is, I tried to bring the matter down to a focus by bringing the thoughts of others into one system of grading. In the first place I took the Washington grading as a background, and then incorporated mainly the suggestions of Dr. Miller, in our July 1st number, who had previously considered those put forth by Messrs. Thompson, Walker, and others. Here are the rules that I "doctored":

**FANCY.**—All sections to be well filled, combs straight, and firmly attached to all four sides, the comb unsoiled by travel-stain, or otherwise; all the cells sealed except the row of cells next to the wood; the outside surface of the wood well scraped of propolis.

**A No. 1.**—All sections well filled, but combs uneven or crooked; one-eighth part of comb surface soiled or unsealed, or the entire surface slightly soiled.

**No. 1.**—All sections well filled, but combs uneven or crooked; one-eighth part of comb surface soiled or unsealed, or the entire surface slightly soiled.

**No. 2.**—Three-fourths of the total surface must be filled and sealed.

**No. 3.**—Must weigh at least half as much as a full-weight section.

In addition to this the honey is to be classified according to color, using the terms white, amber, and dark; that is, there will be "fancy white," "No. 1 dark," etc.

The "Fancy" and "A No. 1" correspond exactly with Dr. Miller's "Fancy" and No. 1 on page 483, July 1st issue. I have changed the designation of the second grading, putting it "A No. 1." No. 1 is identically the same as A No. 1, you will notice, with the exception that no mention is made of the scraping of the sections. The greater part of honey that is put out is in sections not scraped; and it follows that the greater part of all honey sold will be in sections soiled or unscraped, and should be designated as "No. 1." I know Dr. Miller believes that most honey put out is scraped; but if he will go over the markets as I do, and buy honey as our firm has done, he will note that very little of it has been near the scraping-knife.

Mr. Walker and a number of others pointed out that more than two grades are necessary to include the bulk of marketable comb honey. It will be noted that I have already added one extra grade to take in the bulk of comb honey not scraped; namely, No. 1. I now add two more—the No. 2 and No. 3 that Dr. Miller proposed some years ago, and which we reproduced on page 482, July 1st issue. Such honey should not be put on the market; but as it is, nevertheless, it must be designated in some way or other.

I have carefully looked over Mr. Walker's revised grading-rules in this issue, and the only criticism I have to offer is that they are too wordy, and there are too many little conditions and points that one would have to bear in mind to grade by. The rules must be very

simple to be operative. Really, I do not know which would be the better rules to abide by—those above given, those proposed by Mr. Walker in this issue, page 551, or some other.

The editor of the *Review* believes that the Washington rules—those we have been using right along during the two past years—were all right—good enough for anybody—that we mustn't expect to suit every one.

#### ERRATIC SWARMING FOR 1897; THE SPRAY-PUMP A NECESSITY.

JUDGING from the letters that have come in, and from our own experience, swarming this year seemed to be a little more erratic than usual. In our own vicinity, for instance, the bees have seemed determined to go off without first alighting; and it has been only by the most vigorous use of the spray-pump that we have been able to hold them. One swarm actually left us. It seems they flew high into the air, went over the factory buildings, clear out of the reach of spray-pumps and every thing else, and didn't even say, "By your leave." One other swarm I was just able to reach with the spray. They were fast making off when I wet down the wings of the leaders, changed their course, and finally, by vigorous dousing, induced them to alight. Heretofore we have been in no great hurry to take care of swarms when they came out, because we knew they would alight before going away.

I noted in Straws for July 1st, that Dr. Miller asks why we do not clip, and save all this nonsense. As we make quite a business of selling queens, we find that our customers do not all want their queens' wings clipped. When a man sends off a distance to get a queen he likes to show his beauty to his friends, and, of course, wants her to look perfect—not one-sided. We are obliged, therefore, to put up with the nonsense.

#### A CHANGE OF MIND.

The foregoing was prepared for our last issue, but it was crowded out at the last. I just want to say that I have changed my mind. The care of swarms devolves upon your humble servant, Sundays and at the noon hour. I may be mistaken, but it *seems* as if those pesky bees selected their times to swarm when I am on the watch. So far as I am concerned, I have about concluded that, in the future, our customers will have to take "one-sided" queens or go somewhere else. I have chased and squirted, climbed trees, and puffed and fumed, till I am tired. We have already begun the process of clipping our queens' wings; and if our customers do not like it—well, they can just go elsewhere.

Our tested and high-priced queens are, as a rule, in big colonies that can produce honey. I used to feel that a colony could spare its queen in the height of the honey-flow, and then there would be no danger of swarming; but, as I have shown in last issue, p. 531, a queenless colony sulks too much. I am wondering whether a queen-rearing apiary, a comb-honey apiary, and an extracted-honey apiary can be combined all together all at once. The echo in my own mind says, "Nit."



## OUR HOMES.

Oh full of all subtilty and all mischief, thou child of the devil, thou enemy of all righteousness, wilt thou not cease to pervert the right ways of the Lord?—ACTS 13:10.

Our readers may remember that, during the year 1895, I at different times mentioned the electrical fraud or humbug called Oxydonor, in connection with my repeated warnings in regard to the humbug toy called Electropoise. The matter would probably have never been referred to again were it not for something I saw in the Patent Office *Official Gazette* for July 6, 1897. On page 185 we are told that, on the 15th of June, 1897, a patent was granted to Hercules Sanche. This Sanche applied for a patent on his swindling Oxydonor as early as 1887. His application was promptly rejected, on the ground that it was not an electrical apparatus—there is no electricity about it; and also that his claim, that it extracted oxygen from the air for the benefit of the patient, was ridiculous. He then admitted there was no electricity, but claimed that some other force circulated through the wire hitched to the patient's ankle. He also dropped the oxygen part of it; but it was again rejected. Permit me to make an extract from the *Official Gazette*:

On January 31, 1888, these claims were rejected by the Primary Examiner for the reason that the apparatus must, if operative at all, be subject to the laws of electricity, or of some other force; it is not at all satisfactory to present it as an electrical apparatus, and at the same time to say that it is not subject to ordinary electrical laws, as has been practically done. It is not admitted that the body is a magnet, or subject to the laws of magnetism; and if it were, the apparatus described would have no influence upon it.

The numerous affidavits which have been filed relate to the treatment described in another application, and have no bearing on the present case; and in any event, affidavits of the patients would not demonstrate the operativeness of the apparatus as an electrical device.

But year after year it seems he has kept on. Let me extract again from the words of the *Official Gazette*:

After a careful re-examination and consideration of the arguments and evidence presented, my conclusion is unchanged; that is, that the invention is not "sufficiently useful and important" to warrant the grant of a patent. (Section 4892 of the Revised Statutes.)

The novelty of the apparatus is admitted, and the affidavits and testimonials presented, together with the unsolicited reports that have come to me, leave no doubt in my mind that the use of the apparatus has in some way benefited some of the persons who have tried it. I am still of the opinion, however, that the favorable results obtained were due largely, if not wholly, to the imagination of the patient. It is a common practice among physicians to administer bread pills in certain cases; and the wearing of an iron ring upon the finger, or the carrying of a potato in the pocket is regarded by hundreds of people as a certain cure for rheumatism. Scores of similar remedies could be referred to, all of which depend for their efficacy upon the power of the imagination. The present application, in my opinion, is of this description. I could not conscientiously sign a patent for the apparatus in question.

The former decision is adhered to.

Finally, however, in June, 1897, this man Sanche, by some hook or crook, has gotten some sort of patent. The reasons for revoking the former decisions and granting the patent are given below:

"If some scientist will devise some way or means of working on the imagination so as to cure physical dis-

ease, he will be a public benefactor, and this Office will be prompt to issue a patent to protect him in the enjoyment of his invention or discovery, if it has the element of novelty. For we may be thus able to dispense, in part at least, with the nauseating decoctions that are now presented to our lips whenever we are ailing."

It is thought that this claimant is justly entitled to a patent under the law, and the decisions heretofore rendered denying him a patent are set aside.

Now, friends, you have the history of this disgraceful affair, or at least a glimpse of it, before you. It is not only a disgrace to the man Sanche, for he is too hardened a sinner to hesitate at any thing to secure his purpose; but just consider the fact that our Patent Office should grant a patent, and permit the patentee to go out and humbug sick people, because they would be better humbugged in this way than to be dosed with "nauseating decoctions"!—taking it for granted, it would seem, that neither the one nor the other has any effect on the patient. We might laugh at the matter, and call it a joke; but this Dr. (!) Sanche calls himself not only a physician and a scientist, but a *Christian*. His hypocritical swindle is worked mainly through our religious periodicals. A while ago he secured the confidence of the women of the W. C. T. U., and persuaded them that he was a benefactor of mankind, and so got his fraudulent advertisements into their publications. He made it appear that he was a companion of Woolley and Moody. Our readers may remember that I exposed the latter scheme, and got a letter from Mr. Moody himself, saying that he knew nothing of the man or scheme, and never gave permission for his name to be used in any way whatever.

In God's holy word we have several accounts of the way in which the prophets of old pronounced sentence on those who appropriated "the liverty of the Lord to serve the Devil in." Ananias was struck down dead; Gehazi, the servant of Elisha, when he undertook to make a little money because of being a servant of one of God's prophets, was smitten with leprosy; but in this nineteenth century, with all of our progress in science and art, and especially our discoveries in electrical science, such men as Sanche go about and ply their trade almost unrebuked. Religious papers accept their advertisements; and when anybody remonstrates, they reply that it is not their business to inquire into scientific merits of the thing; and even our Patent Office grants a patent when sufficient importunity is brought to bear, for no other excuse than that many of the drugstore medicines have no more sense or science to back them up than "the wearing of an iron ring on the finger, or the carying of a potato in the pocket," . . . . "as a certain cure for rheumatism."

Our Patent Office examiners are sharp enough and bright enough. Sanche's twaddle about oxygen and electricity, and some other force running along a single wire, was not listened to a single moment. He was ruled out again and again. If you want the history of the whole thing, send for the *Official Gazette* of July 6.

In our previous issue I spoke of letting rats and mice encroach upon us because of our

half-heartedness; but how about letting these thievish rascals in human form prey upon us?

A young lady, who is almost our next-door neighbor, heard of Oxydonor, and was actually considering investing \$25 of their hard earnings. Are the editors of our religious papers excusable for receiving advertisements of things they *know* and *admit* to be frauds and humbugs? Dr. O. W. Holmes said, some years ago, "Quackery hobbles along on two crutches. The one is the superstition of women, and the other is the indorsements of clergymen." Instead of clergymen he should say the editors of religious papers, to better fit the present time. You know, friends, how I have labored in this matter; but if I should take this *Official Gazette*, and read this whole thing to the editors of some of our religious papers, they would coolly inform me (in substance) that it was no business of theirs so long as they *got pay* for the advertisement! Let me digress a little.

A few days ago my sister, Mrs. E. J. Gray, a prominent worker and officer in the W. C. T. U., while attending a temperance meeting at Lakeside changed cars at Elyria and went in to purchase a ticket. A dull, stupid, country-looking chap stood in her way while she was purchasing her ticket. When she attempted to go out of the door this same chap stood in the doorway, evidently not having sense enough to go either out or in. She then noticed stupid-looking, awkward country chap No. 2, and they were around pretty near each other. When she attempted to board the train, these two ever-present "greenies" were in the way again, and she began to lose patience at their stupidity. The leader did not really seem to know enough to get out of the way; but she finally managed to get past them, but in doing so they gave her quite a push. She passed on, feeling vexed to think that anybody could be so dull as to be a continual stumblingblock in the way of busy people. Pretty soon she noticed her handkerchief half way out of her pocket, and then she found her pocketbook was missing. Then the whole thing revealed itself all of a sudden. This fellow was a pickpocket, and No. 2 was his "pal." She remembered the latter standing near, and almost remembered something passing between them when she jostled against No. 1. He stood by the ticket-office window to see where she kept her pocketbook; then he tried to get it while she pushed past him when going out of the door; but when he got in her way the third time, as she was getting on the train, he succeeded, and passed the purse to his pal, so that, even if she had had him arrested, she could do nothing. The ticket-agent informed her afterward that as many as three pocketbooks were found on the sidewalk that morning. These fellows quickly emptied out the money, dropped the pocketbook so to escape identification, and then stood around watching for more "game."

Permit me to say, before dropping the subject of pickpockets, that we should get rid of this pest of society and civilization just exactly as we get rid of rats and mice; and, furthermore, it is a disgrace in the locality to

have such fellows prowling and succeeding in their work, just as it is a disgrace to have rats and mice in and around your premises. Wake up, and declare with manly energy that these things shall not be; then stick right to it till you get them trapped and the nuisance is abated.

Now for the bearing of the pickpocket story on the case before us. These two fellows, with their countryfied air and cheap ready-made clothing, were *rascals*. They ought to be, and the good of society demand that they *shall* be, speedily locked up, and then converted from the error of their ways. Their calling is a *disgraceful* one; and the matter is so self-evident that you look up in surprise when I say picking pockets is a "disgraceful occupation." But, my friends, these two chaps who aped stupidity are *gentlemen* beside the Oxydonor and Electropoise people. They do not ape *Christianity*—at least, I never heard of a pickpocket so doing; neither do they rob sick people—certainly not as a rule. They get their money from people who are able to go about and do business; and I shouldn't wonder a bit if they would actually blush with shame to be caught charging \$25 or even \$10 for a humbug scientific apparatus advertised in religious papers, and boomed by ministers of the gospel who lack even the rudiments of a knowledge of electricity or chemistry.

Do you ask how we shall abate the nuisance of pickpockets? Well, in the first place have your money stowed away in some place where a pickpocket can not readily get at it unless, indeed, he should knock you down. Then when you go into crowds or places where such fellows frequent, avoid showing money or your pocketbook. I have done quite a little traveling, as you may know, and I always make it a point to have the money for my ticket in my fingers, or in some convenient pocket, before I reach the ticket-office or get into the crowd. Never take out a roll of bills if you can help it, where people are standing around, especially among strangers. With a very little care you can manage to pay all your bills without having a sum of money in sight, or where a pickpocket can get at it. Especially, avoid anybody who seems to be awkward or always in the way. This is an old game. And, by the way, if people generally would take a little pains to avoid standing still in doorways or busy thoroughfares, or in crowded church-aisles, it would be a great help all round. I frequently come pretty near losing all the effect of an excellent sermon because somebody stands in the church-door, and goes neither in nor out, keeping a whole string, myself among them, waiting when I am in a great hurry. Perhaps I too am guilty sometimes of getting in the way of busy people; but I have made many big resolutions to try and not do it thoughtlessly again. I am under the impression that a *woman's* pocket is not the place to put money. I do not believe, either, it is just the thing for her to carry her money in her hands—at least, not very much money. I was just going to tell you where I carry my money in traveling; but it might be a bad plan to give away my secret. In the first place, I do



not *have* much money. I carry checks of, say, \$25 each, and these I can get cashed at any bank. Then I stow away the \$25 where a thief can not easily get at it, taking out just enough for each day's expenses, when I am in a room by myself—that is, when I am among strangers. Rats and mice won't stay around, and, for that matter, frauds either, unless you bait them with something good that they can get at; neither will pickpockets. Let me modify the latter a little. Go into any town where saloons thrive and make a good living, and *there* you will find pickpockets. The scene I have described happened where a considerable-sized railway depot is planted right in the midst of a hot-bed of saloons. Banish the saloons, and you will get a good way along in banishing the pickpockets.

Now, then, while you are, by precept and example, saying to the saloon-keepers, pickpockets, and all others of that class, as did Paul in the language of our text, "Wilt thou not cease to pervert the right ways of the Lord?" let us also remember the slick persons who mix among Christian people, and get into the advertisers' department of religious papers, and induce ministers of the gospel and other Christian people to help them rob the sick, the suffering, and the dying. Let us cast out these persons who, under the guise of being philanthropists, scientists, and inventors, charge enormous prices for their hypocritical humbug toys. Let us *especially* beware of "false prophets which come to us in sheep's clothing, but who inwardly are ravening wolves."

such condition. In fact, I had been feeling for some time previously that very likely the doctors were right in saying that I should never be a well man—that I might as well give up planning for any active work during the remainder of my life. Perhaps you have had such thoughts and feelings yourself.

Well, we started off on our wheels. I did not feel any worse during the first ten miles, and, in fact, I did not feel very much better. After we reached the celery-farm I told friend Keck I guessed I had better go over to the station and get home before I was any farther away. After looking over the beautiful plant of Jordan Brothers, however, and asking them questions about this, that, and the other treatment, I soon began to forget my aches and pains. Some little time ago, you may remember, I advised them to try one of the Breed weeders made especially for onions. They got a machine in accordance with my advice. Said I:

"Oh! by the way, how did your onion-weeder turn out? Did you get your money back on the investment?"

He turned around, and, in his peculiar way, lifting his hand as if to add emphasis, said:

"Mr. Root, that onion-weeder paid for itself in *one day*."

I do not know but he added afterward the expression was a little strong; but they really succeeded, as I thought they would, in not only running the weeder lengthwise of the rows, but they pulled it crosswise also. The boys who pulled it could easily step over the onions; and in this manner the ground was pulverized most thoroughly in and around and between the plants.

They were having some trouble by the first early celery sending up seed-stalks. I wanted to get at them myself and pull out the useless plants that were determined to go to seed; but the boss said, something as we have it in the parable, "Not so; for in pulling up the useless plants you will disturb and injure the good ones. Let them both stand till the harvest, which is soon coming, and we will sort out the bad ones as fast as they are gathered."

There was considerable discussion as to whether it was the strain of seed, the unfavorable weather during the spring, or a lack of water at a critical period; and I believe all decided that the latter was the trouble, or at least one of the prime causes of it. The most of this thing happened in the new celery culture where plants are put so very closely together, and, of course, it would need the greatest quantity of water, especially as they approached maturity. Where the plants were in rows two and a half feet apart or more a far smaller proportion had shot up seed-stalks.

They had the handsomest field of American Pearl onions I ever saw in my life; but as they were not started under glass, as our own were, it will be some weeks before they harvest their crop.

They are using, for a fertilizer on the celery rows, bone and potash. They were also sprinkling the beds with quick-lime in order to counteract the effect of blight, which made them much trouble last year. They began gather-



#### ON THE WHEEL.

After the torrid wave along the fore part of July the weather changed very suddenly; and as I was a little careless about changing my thin attire for one more appropriate for the weather, I took a severe cold and had another attack of malarial chills, or something like it. Of course I thought of my regular cure for such troubles—the wheel; but for two or three days, in spite of the beefsteak, I felt too sick to ride the wheel or to do anything else. However, on Saturday morning, July 17, I was agreeably surprised to meet Mr. E. C. Keck, of Bowling Green, Florida; and as he is interested in gardening, either north or south, I very much wanted to take him to the celery and small-fruit farms in our county. At first I planned to go with a horse and buggy; but I actually felt too sick to ride in a buggy twenty or thirty miles; but finding that Mr. Keck was something of a wheel-rider I said we would start out; and if I could not stand it I would go to the nearest station and return home on the cars. I remember of thinking, after I decided to go, that it was preposterous for me to undertake to go away from home in

ing and shipping celery about the middle of July.

When we were through talking I told Mr. Keck I felt so much better I thought I would venture to push ahead another ten miles. We had a macadamized road, and the wheeling was grand. When out four or five miles I noticed that I was beginning to draw in long breaths that filled my lungs completely, as I often do in climbing hills. It came natural and easy to fill my lungs clear out to the fullest extent—something I seldom do except when out on my wheelrides. A little later I felt my second wind beginning to reinforce my strength and buoy up my spirits; and when we came near the town of Lodi I had actually forgotten my indisposition. In passing a large raspberry-patch that covered the side of a hill I remarked to friend Keck that it was a part of Prof. W. R. Grannis' raspberry-farm.

A little further along I noticed a board on a gate-post, announcing, "Jersey cow and calf for sale. W. R. Grannis." So there was where he lives at present. We turned our wheels into the lane. The professor himself soon made his appearance, with one of his eyes swollen up. You see I sent him GLEANINGS complimentary a while ago, when I was writing up the raspberry business; and the result was he got to reading about *bees*. Without my knowledge he had also been studying the A B C book; and, sure enough, there was a row of neatly painted hives right along by the dooryard fence. He was going to show us some of the wonderful achievements his bees had been performing with the aid of the clover-fields all around about his pretty home. But we told him we wanted a drink of water before we explored either bees or berries. Said he:

"Well, you just come right into the house, both of you."

"But, friend Grannis, we have not time to go into the house. We will just sit out here in the shade."

"No, that will not do; you have got to come into the house to get the water."

Just then it occurred to me that Prof. Grannis and Dr. C. C. Miller are in many respects a good deal alike. They are both godly, both professors of music, both bee-keepers, and both have a quaint way of making you feel acquainted, even if you have never seen them more than two minutes. We followed our host into the house, then we turned into a room adjoining the kitchen. This room was paved with stone flagging; and right out from the stone wall in the further corner there came a stream of crystal water nearly as large around as your wrist. It poured into a large trough or vat, circulated around among the pans of milk, and passed out at another corner of the room.

"Why, friend Grannis, do you really mean to say that this is *spring water*, and that it runs that way nights and Sundays and all the year round?"

By way of answer he extended a drinking-glass, and told us to taste and see—beautiful cool spring water right out of the sandy rock in the hillside. After leaving his house the wa-

ter flows through the barn, treating all his stock to a running stream, then it extends a little further to a trough by the wayside, where it refreshes the thirsty traveler and his beast. After we had drank sufficiently I wanted to wash my hands. While doing so some tame goslings came up and began to talk as if they wanted to get acquainted. May be you think it queer to hear me speak of goslings that could talk. Well, they did talk, and quite entertainingly (to me). The professor explained that they wanted me to hold down the wash-basin so they could get a drink. Then they wagged their tails and expressed their satisfaction as only a gosling knows how to do. You see, while friend Grannis enjoys himself with the berries and the bees his good wife raises ducks, chickens, and geese; and with this abundance of spring water, every thing goes on "swimmingly." I use this word after mature deliberation, and I think it is the right one. Well, I found so much to entertain me around that pretty home that we were urged to stay for supper. Friend Grannis promised us some white-clover comb honey, which he thought we did not often find. I told him I did not care so much about the supper, but I felt sure I should get home with much more satisfaction if I could have a nap of fifteen or twenty minutes, for you see I had not had one at all that day, and I considered myself an invalid besides, or at least I did so consider myself when I started away in the morning. I had forgotten to say that, some time during the visit, we looked over the fence and got at least a very good "glimpse" of the eleven-acre field of raspberries in full bearing, and I suppose that is the reason I did not want any raspberries for supper. I looked at them so long over the fence that I got over being raspberry hungry. See? They were Greggs, and just ripe enough to be luscious. Did I tell you I was on the beefsteak diet? Well, when I am off wheel-riding I leave my special diet at home.

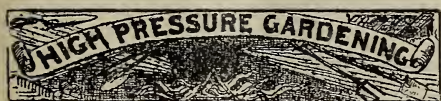
If I remember correctly, friend Grannis is a professor of music; but of late I think he must do a great deal as I do—drop his mantle over his children's shoulders. When we were shown into another room after supper, and heard his grown-up daughter play, while Miss Lottie, only ten or twelve years old, sang to us, I really felt *ashamed* of myself to think I had not in the morning faith to believe that God in his great mercy had in store such exquisite happiness as I then and there enjoyed while listening to that music. The first piece was called "Dear Heart;" and if you have never heard it, please do not miss it when opportunity offers. The next piece was called "The Holy City." We call it "Jerusalem" for short. I shouldn't wonder if I enjoy music rendered by childish voices, in a way that I never shall and never can any other. And, again, that second wind that I get in wheel-riding gives me a zest, not only for a good supper, but for music, painting, oratory, literature, or any thing else.

When we started for home the sun was but little more than an hour high, and my special errand to Lodi was to investigate the new oil-



works. Ten years ago or more they drilled for gas, and found a stream large enough to light the home of one of the owners, very fairly. Some time last winter the pipes began to send out *oil* instead of gas; and now a great derrick and immense pumping-engine are being put in place in order to gather the oil.

We reached home about eight o'clock in the evening. Our people were gathered out on the lawn; and when I began, with great animation, to tell about our wonderful trip and its enjoyments, somebody asked about my sore throat and malarial chills. At first I did not exactly understand; and when I said, "Why, let me see! *was* I sick when I started away this morning?" they burst into a loud laugh; for, to tell the truth, I reached home in such exuberant spirits I actually had forgotten my experience of the fore part of the day; and I am afraid, dear reader, I had forgotten, till that moment, to give God the praise.



#### GROWING STRAWBERRY-PLANTS.

I have before explained many times why it is that a well-rooted young plant in July is worth ever so much more than one later. It is a good deal like the old adage—

A swarm of bees in May  
Is worth a load of hay;  
A swarm of bees in June  
Is worth a silver spoon;  
A swarm in July  
Is not worth a fly.

But the way honey has been coming this summer, and that, too, during the last part of July, makes me inclined to think that a swarm of bees in July might this season be worth considerable after all. Well, a strawberry-plant put out in July may make two good plants in August; four by September; eight by October, and sixteen by November. If you have the plants in beds, and put on sashes, you may make thirty-two by Christmas. Again, if you keep off all runners, and just make the plant grow big and stocky, you may get a whole quart of berries from a plant that has not been located even one year. For the reasons just given, we *push* plant-rearing during this month. In fact, we have been shipping plants at a lively rate every day for several days back. Now, how shall we manage to get good stocky plants with the least expense and trouble? There is no better way to start them than the one laid down in the strawberry-book. Set out your plants in the spring in good rich ground well fined up, in rows four feet apart, the plants being two feet apart in a row. By July, if you have done your part with the cultivator and weeder and hoes, the plants will be setting considerably. Some say, keep the runners off till the plant gets strong; but this would deprive you of your early plants.

If, then, we are going to make the most of these early plants, how shall we manage to

keep on cultivating, stirring the soil, and keeping out weeds? A problem besets us right here that I have discussed many times in these pages. The trouble is to find a man or boy who will put the runners in place so as to have them crowd each other as little as possible, and at the same time not get out into the row in the way of the cultivator. I have explained the thing over and over to men and boys whom I considered bright and intelligent. I have even made drawings on a board of what I wanted, and told them to take the board along down in the field; but I have been obliged to give it up in despair. When I go to look over the work I find runners rooted sticking right straight out into the row where the cultivator could not get through without digging them up. Then I would find three runners on one side of a plant, crowding each other, and not a runner at all on the other side. The plants would be altogether too close for thrifty growth in one spot, and great glaring vacancies where they might and should have been put. Some runners will grow a foot or more before making a bud for the plant; others will grow three or four inches. Now, the long ones should be made to fill the vacant spots that need filling, and let the short ones take the next best place. I suppose nobody else *loves* strawberry-plants as I do, and that is one reason why nobody else gives the matter sufficient thought and attention to make it a success.

Well, now, I have hit upon a little device that has enabled me to give my plants space in very good shape, and at comparatively small expense. When they began to put down runners on the Brandywine and Wm. Belt rows, I called two of my good boys, Carl and George. We first stretched a string just as near the row of plants as we could have it and still give room inside the string to set all the runners. Then the boys were given two trowels to break up the crust between the plants where the cultivator could not go, and make it all mellow. Then they put the runners down, placing a little dirt with the trowel over and around the bud, making each plant go inside the string. They thought I might give them a little more room by putting the string further away; but I told them we would put it further off next time. They got them all in nicely, leaving a space of five or six inches between every two plants. Then they took a hand-hoe and cultivated the ground up soft and fine clear up to the string. The string was then moved to the other side of the row, or, rather, two strings were used, one on each row of berries, leaving a path from 15 to 18 inches wide between the two strings. Here the boys stood (or sat down) while putting the plants in place.

After the row was finished, of course so much walking on the path would make it hard from the stamping. The boys therefore always went through with their wheel-hoe, and fined it up again. After the boys had finished their work, a nice shower of rain came up, and every plant they had put down was soon rooted, right where they put it. It was indeed a pleasant sight to behold, especially as the edge of the bed where the string was stretched

was as straight as a line. A man could go in with a horse (and, in fact, did go in with a horse), and keep the space between the rows beautifully fined up and keep down all weeds.

Well, we are just now doing the same thing out in the field. A string is stretched each side of the row just as close as the stage of growth will allow. The plants were all made to go inside of this string. Vacancies that can not well be filled otherwise are fixed with the transplanter.

You may say it is lots of trouble to put every runner down by hand where you want a plant to grow; but I believe it is less trouble than to have your rows in certain places so wide that scarcely a path is left. A man who has any taste and skill at all will go into a nice strawberry-patch made as I have directed, and run his fine-toothed cultivator clear up to the point where the string was stretched, and will do you a handsome job. If you are selling plants, you get ever so much better roots to have the ground evenly occupied. Now try it, and see if my invention in strawberry-growing is not worth something, even if said invention is not (when you come right down to it) any thing more than a ball of string that costs only a nickel.

#### THE GAULT RASPBERRY.

Several have inquired why we have had so little to say of late about the everbearing raspberry. Well, we stopped selling plants some time ago because there was so much difficulty in getting them to grow. We have in some cases sent them the second or third time, and even then failed. Another thing, all of the blackcap raspberries on our grounds are affected more or less with anthracnose. Either of these reasons would be sufficient, perhaps, to explain why we no longer offer them for sale. One or two have been unkind enough to pronounce them a humbug. One of our clerks, while dictating a letter to one of these friends, remarked that, if the man could see the Gault raspberries in her mother's garden, he would never think of calling it a swindle. Our two boys, Frank and Fred, have just informed me that they have succeeded excellently with them at their homes. One or two have complained that they do not bear a second crop, and I believe this second crop sometimes fails to show up until the plant gets to be strong and vigorous. I think it is true, however, that, like many other new things, it does not seem adapted to *all* soils and all locations. This we find true with all sorts of berries, especially strawberries. The Jessie does wonders with one person, and with the next it does not seem to amount to anything. Don't be in haste to claim you have been swindled because certain new fruits do not always do well on your grounds.

#### THE CRANDALL CURRANT.

We have just received from H. L. Wise, Berkley Springs, W. Va., some twigs by mail, loaded with Crandall currants, so large they look more like cherries than any thing in the currant line; and yet, from my own experience with a single plant which I have in my garden, I might claim I had been humbugged.

#### THE LOGAN BERRY.

This blackberry-raspberry has given us a few berries this year about as large as a good-sized blackberry, and as luscious, I should say, as any red raspberry. It is a very strong grower, and promises to be a desirable acquisition. The strawberry-raspberry, however, has not yet amounted to any thing in the way of fruit. Our June-berries have this season given us a good crop of most luscious berries. The birds take such a shine to them, however, that we had to fight for them after the birds discovered where our group of bushes was.

#### POTATO-BUGS, PARIS GREEN, ETC.

During the severe hot weather along the fore part of July, potato-bugs started out with almost unprecedented vigor. Hundreds of potato-growers found their vines almost stripped before they knew there was a bug in the fields. In fact, so great was the demand for Paris green that we received the following letter from one of the largest wholesale drug-stores in Cleveland:

*Gentlemen:*—As we are sold out of Paris green, and unable to procure in this city, and failed in our efforts to get a portion from Buffalo, Detroit, Columbus, and Toledo, we are in no position to serve our friends for this commodity. STRONG, COBB & Co.

Cleveland, July 13, 1897.

We at once sent our order to New York, and got it filled promptly. Now, there is pretty sure to be a chance to learn something useful during all these extremes of temperature—or, if you choose, unexpected happenings. When we were sold out of Paris green we tested a great variety of "bug-powders," including slug-shot, buhach, hellebore, mineral ash, etc. While each and all of them do some good, there is nothing that approaches pure Paris green applied with the bellows made for that purpose; and there is nothing so sure and quick-acting, and nothing so cheap. That is my decision. A good many of these things kill by contact, and, for that matter, common road dust I have sometimes thought almost as good for the potato-bug larvæ, or slugs, as many of the expensive remedies. When they are greasy and shining, and covered with a sort of sticky liquid, any sort of dust, if there is enough of it to put on, is death to them. If this is alkaline, like mineral ash, or pungent, like slacked lime, perhaps it is somewhat better; but I do not believe potatoes make good progress when their foliage is covered with dust. A dusting of Paris green so slight that it can not be seen by the naked eye is death to the bugs; and if it does not rain, this same foliage is death to every insect that begins to gnaw the leaves.

Now just a word about prices on Paris green. It is all right for druggists to charge 10 cts. an ounce for things that cost them only 10 cts. a pound, where the article is called for only once in a while, or where they have to furnish a bottle and cork, or something of that sort; but to charge 35 and 40 cts. a pound for Paris green, when it may be had wholesale for 14 or 15 cts., is not Christianlike nor businesslike, in my opinion. Paris green has come to be a great staple. Farmers must have it, and they can not afford to pay great prices. My 100-lb.



shipment cost me in New York 13 cts. per lb., and I can easily put it in  $\frac{1}{4}$ -lb. packages and sell them for 7 cts. each, or a whole one-pound tin can for 22 cts., and we can furnish absolutely pure Paris green at this price. Now, I am not mentioning this to advertise it, but to advise you to purchase it at your nearest drug-store. Show this article to your druggist, and I think he will agree to furnish it at these prices, and I will tell him where to buy it if he wishes me to do so.

In the *Rural New-Yorker* I notice some discussion as to why the bugs are worse on some varieties of potatoes than on others. The *Rural* says, and with much truth, that the bugs pitch into the potatoes latest planted. This is true until you come to potatoes planted in July, that come on after the worst of the bug season is over. I have seen acres of such potatoes with not a bug to be found. By the way, there is a good prospect that the great raid of bugs is going to make potatoes scarce and high-priced; at any rate, it will pay the potato-grower to watch his vines closely. With a good gun (or bellows), and plenty of good Paris green, it is not a very expensive job to keep the bugs off entirely; and if you kill them thoroughly one season you will find it much easier to fight the battle the season afterward. One thing more:

There are certain varieties of potatoes that are much less liable to be troubled with bugs, and I believe it is, as a rule, the rank strong growers, especially among the late potatoes. Manum's Enormous and Craig are troubled but little, comparatively. Years ago we noticed that the *Rural New-Yorker* was not troubled nearly as much by bugs as the other kinds. I am sorry to say that the Thoroughbred seems to be especially picked out by the bugs.

#### MY GOOSEBERRY STORY.

Gooseberries have been rather slow sale now for two seasons; yet we have sold quite a few this summer at 5 cents a quart. I thought at first this was a rather low price, and was questioning whether it paid, so I made a little investigation. Two or three years ago I thought I should like to see what gooseberries would do down on our very rich creek-bottom land, where every thing goes to vines and foliage. So I moved seven or eight gooseberry-bushes down there and watched for results. Last year one of the bushes grew taller than my head, and bore a pretty fair crop of berries. This season it was once more loaded with berries. In fact, the tall bushes bent clear over and rested on the ground. This bush has already given us a peck of berries, and there is certainly another good peck to be picked. I think the variety is the Houghton, but the bushes are very tall and spreading. There are no thorns on the bush or on the berries; and this is a matter of some moment also, because, where there are no thorns in the way, you can hold a basket under the branches and strip the berries right off. I think one could easily strip off every berry in this way in half an hour. In fact, it ought not to take more than a quarter of an hour. But we will estimate the crop from the one bush at half a

bushel, and the cost of picking at 5 cts. That leaves 75 cts. profit for a single crop on one gooseberry-bush. This seems almost incredible; but there is the bush with half of its crop remaining. Besides the peck that has already been picked I have helped myself quite liberally, and advised my friends to do the same, several times. They are just now ripe enough to eat. I begin to think one reason why we have not sold our gooseberries better is because we have not sold them cheap enough. If a market can be found for them when canned, there is a tremendous chance for a gooseberry-farm. They are not perishable; and there is so little danger of bruising in handling, that, when they are gathered green, they might be sent to market in a bag; and the bag, if it did not contain too many berries, might be carried on horseback. Then there is an opening for gooseberry jam and gooseberry jelly. Can anybody tell us more about it?

*Mr. Root:*—I should like to have Dr. Miller tell whether sweet clover does as well if sown in the fall as in the spring; also your opinion, and whether it has to be sown every two years, as some claim.

Luce, Mich., July 23.

WM. CRAIG.

I can only answer for myself, that I know nothing about it; but I know that the seed that drops off in the fall comes up the following spring. We have not sowed any sweet clover anywhere for a good many years, and we never sowed any along the fence-corners and waste places, although we have been many times charged with so doing. Will Dr. Miller please answer?

### Special Notices in the Line of Gardening, etc.

By A. I. Root.

#### A "DARLING" STRAWBERRY-PLANT FOR EVERY DOLLAR SENT US FOR GLEANINGS.

As we think the Darling is sure to please, and as we want all of you to see one of our "new-process" potted strawberry-plants with the jadoo fiber, we have decided to send one plant free, postpaid by mail, to every one who sends a dollar for GLEANINGS during the month of August. Here is what the originator, M. T. Thompson, Rio Vista, Va., says about the Darling: "If there ever was a berry that would produce 1000 bushels per acre, it is this one. It is a seedling of Michel's Early, and has fruited for us two years. Price of plants, \$3 per dozen."

#### STANDARD STRAWBERRY-PLANTS.

We are now prepared to furnish the old standard varieties of layer plants at our old prices as follows:

10, 15 cts.; 75 cts. per 100; \$6 per 1000. If wanted by mail, add 5 cts. for 10, 25 cts. per 100, for postage. The varieties that we now have ready to send out are Jessie, Parker Earle, Michel's Early, Warfield, Bubach, Edgar Queen, and Haverland. Please notice we are not yet prepared to send these out in quantities during the present month larger than 10 or perhaps 100 of each kind; and if many orders should come in, yours is likely to be delayed until they get to be better rooted. These older varieties can be potted by the new process at a cost of one cent each extra, and a delay of ten days or two weeks of time, for we shall pot the old standard varieties only after they are ordered.

#### GOVERNMENT AGRICULTURAL REPORT FOR 1896.

The Year-book for the Department of Agriculture for 1896 is the most valuable publication I have ever come across among the government reports. It is a book of nearly 700 pages, profusely illustrated with beautiful pictures touching upon many points of intense interest to farming, gardening, and other branches of agriculture. Among the subjects treated

are steam-apparatus for spraying; potato, its function in agriculture; irrigation on the great plains, including pictures of home-made windmills; seed-production and seed-saving; migration of weeds; cow peas; improvement of our native fruits; planting waste places; asparagus-beetles, etc. Of this book 100,000 copies have been printed. You can get one free by writing to your Representative in Congress.

#### ASPARAGUS-BEETLES.

For many years I have read about asparagus-beetles, in our various agricultural papers, but rejoiced that we had never known an enemy to the asparagus in our locality—beetle or any thing else. A few days ago, however, one of the boys called my attention to the fact that one of our asparagus-patches was literally stripped of its foliage by a bright handsome little bug and a sort of worm that followed it. They seemed to work exactly like the potato-beetles, bugs and larvæ right along together. We brought out our gun for dusting dry Paris green, and both bugs and larvæ quickly "tumbled to the racket," as the boys say. Now, then, look out. Just as soon as you see a dozen of these bugs (and you may know them because they are such good-looking rascals) on your asparagus you had better commence dusting, wherever you see them, with Paris green. The government report I have mentioned recommends dusting them with dry quicklime, which may answer every purpose. The above report estimates that in York State, where asparagus is largely grown, this beetle did \$50,000 damage in just one county. Chickens will eat them readily if the bushes are shaken or cut down so the chickens can reach them. Whatever you do, do not let them go on until your prospects for an asparagus crop next spring are ruined.

#### TRANSPLANTING STRAWBERRIES.

I have just made a discovery in connection with the use of that jadoo fiber I spoke to you about last month, that I think is going to prove of very great value in disseminating new and high-priced varieties of strawberries. All the vegetable-plants we send out are, as you know, either once or twice transplanted. The transplanting is mainly that we may get a mass of good strong bushy roots. Now, I have for years felt that it would be exceedingly desirable if we could do this with strawberry-plants, say along in July and August. A great many times where you send them out thus early there will be a large showy top and comparatively few roots. Of course, you can pull off the greater part of the leaves, but this does not answer the purpose as does transplanting. Now for my invention:

Potted strawberry-plants are no new thing, as you well know; but there have always been two troubles with them; namely, they can not be sent by mail because the moist earth is too heavy; and if they are not taken up and shipped as soon as the roots fill the pot, they will soon be pot-bound.

The jadoo fiber has proved to be a wonderful success. If the pots are packed with this material, the roots of any strawberry-plant will, in an incredibly short space of time, permeate the whole pot; and the jadoo fiber is so light that, with a proper amount of moisture, half a cent will pay the postage on a plant. Another thing, it holds the moisture better than any thing else I ever saw. So you see we have succeeded in sending potted plants by mail, including the soil that filled the pot. There is no need of sending the pot along with the plants, because the jadoo fiber holds together so well, especially when permeated by the strawberry-roots, that it can not be easily shaken off. I have tumbled the plants around, and taken them out of the pots dozens of times, even during the hottest days, and have fully demonstrated that they stand any amount of handling without even having the foliage drop.

Well, I have done pretty well, haven't I? But the most important part of my discovery is yet to come. It is this: Just as soon as your pots are full of roots, sever them from the parent plant; slip them out of the pots, and set them out in regular plant-beds spaced, say, three or four inches apart. They can be shaded and watered in this plant-bed if necessary; but unless the weather is severely hot, I do not think shading will be needed. In three or four days little white roots will shoot out in every direction from this ball of jadoo fiber. In fact, some of our little plants have sent out little white roots in such numbers that it looks almost like the hairs on a frightened pussy cat; and every gardener and florist, when he sees these new white roots, knows his plants are in the best possible condition. I need not tell you that our plant-

beds are made exceedingly rich, so that every thing grows under high pressure when it starts out.

Now, my dear friend, how much more do you suppose such transplanted potted plants are worth than the ordinary layer plants, especially for fall planting? I am so anxious to have you see what they are like that we will send you one or more plants postpaid by mail at the following prices:

#### PRICES OF TRANSPLANTED STRAWBERRY-PLANTS FOR THE MONTH OF AUGUST.

NAME.	Each	10	100
Darling.....	.25	\$2 50	
Carrie.....	.20	1 75	
Earlie-t.....	.20	1 75	Any of these will
Nick Ohmer.....	.15	1 50	be 1 cent per plant
Margaret.....	.10	1 00	less for layer plants.
Marshall.....	.6	.40	
Brandywine.....	.6	.40	\$3 50
Wm. Belt.....	.6	.40	3 50

All the varieties above, except Carrie, are perfect. At the above prices we pay postage or express charges. Where there is an express office near your home, we prefer to send 50 or more by express.

#### CONVENTION NOTICE.

MR. EDITOR:—The next annual convention of the United States Bee-keepers' Union will be held in the main hall of Canton's Business College, corner of Main and Huron Sts., Buffalo, N. Y., commencing at 10 o'clock A. M., August 24th next, and closing on the afternoon of the 26th.

Papers are to be read by W. Z. Hutchinson, R. F. Holtermann, E. Whitcomb, Hon. R. L. Taylor, Mrs. L. Harrison, R. C. Aikin, G. M. Doolittle, Dr. J. P. H. Brown, Hon. Eugene Secor, G. W. Brodbeck, M. B. Holmes, A. E. Manum, E. Kretschmer, an P. H. Elwood; to which will be added the President's address; and perhaps the General Manager and the Secretary may have something of interest to present.

The programs are now printed, and are in the hands of the Secretary. There are six bee-keepers' songs, with music, in the program, and abundance of time is allotted to the discussion of all papers, and for the asking and answering of questions.

Any one not a member of the Union can have a program sent him by mail on receipt of 5 cents in stamps, by the Secretary.

Several of our well-known bee-keepers, such as A. I. Root, Dr. Miller, S. T. Pettit, and others, who are not on the program, will be pre-ent to help make the convention interesting and instructive.

It is probable that suggestions will be made at this convention in the line of so amending the constitution of the Union as to remove its objectionable features and add such other provisions as may seem desirable; and suggestions in this line by those not able to be at the convention can be sent to the Secretary, to be brought before it. Some suggestions have already been received by the Secretary, and others have been made in the bee-papers.

Those going to the convention should buy round-trip tickets to the Grand Army of the Republic encampment (not to the United States bee-keepers' convention), which meets in Buffalo during the last week of August. The G. A. R. have secured a rate of one cent a mile each way in the territory of the Central Passenger Committee, which is included by Toronto, Canada, thence on a line to Port Huron, Mich.; all of the southern peninsula of Mich.; Chicago, Peoria, and Quincy, Ill.; St. Louis, Mo.; Louisville, Ky., and Pittsburgh, Pa. The Western Passenger Association and the Trunk Line Association make a rate of one fare for the round trip in their territory, to places in the Central Passenger Association, from which points the fare will be one cent a mile each way; but tickets must be purchased to Buffalo from the starting-point. Inquire of your ticket or station agent in all territory outside of those named above for rates and the time the tickets are good for, for I have been unable to learn the rates in such territory, but presume they will be the same as those of the Western Passenger and the Trunk Line Association; but be sure to inquire of your ticket agent, as above suggested.

In the Central Passenger and Trunk Line territory, tickets will be good going Aug. 21, 22, and 23; and, if used at Buffalo, will be good, returning, for 30 days.

Mr. O. L. Hershiser, of Buffalo, has charge of arrangements at Buffalo, and will attend to the matter of hotel rates. Mr. H. writes: "I purpose obtaining accommodations in private families for all bee-keepers who prefer such to hotels." Members of the Union can learn in regard to hotel rates by applying to the Secretary at the place of meeting. If known in time, hotel rates will be given in the bee periodicals.

A. B. MASON, Sec., Station B. Toledo, O.

The annual meeting of the Northern Illinois Bee-keepers' Association will be held at the Court-house in Freeport, Ill., on Tuesday, August 17, 1897. All are cordially invited.

B. KENNEDY, Sec., New Milford, Ill.

#### FOR SALE—140 Colonies Bees.

With fixtures up to date. Three hundred extra hives. Also ten thousand pounds of honey—this season's crop. Part of honey is in one-pound sections and remainder extracted, and to be. Bargain for some one. Yours for business,

ANTHONY OPP, Helena, Ark.